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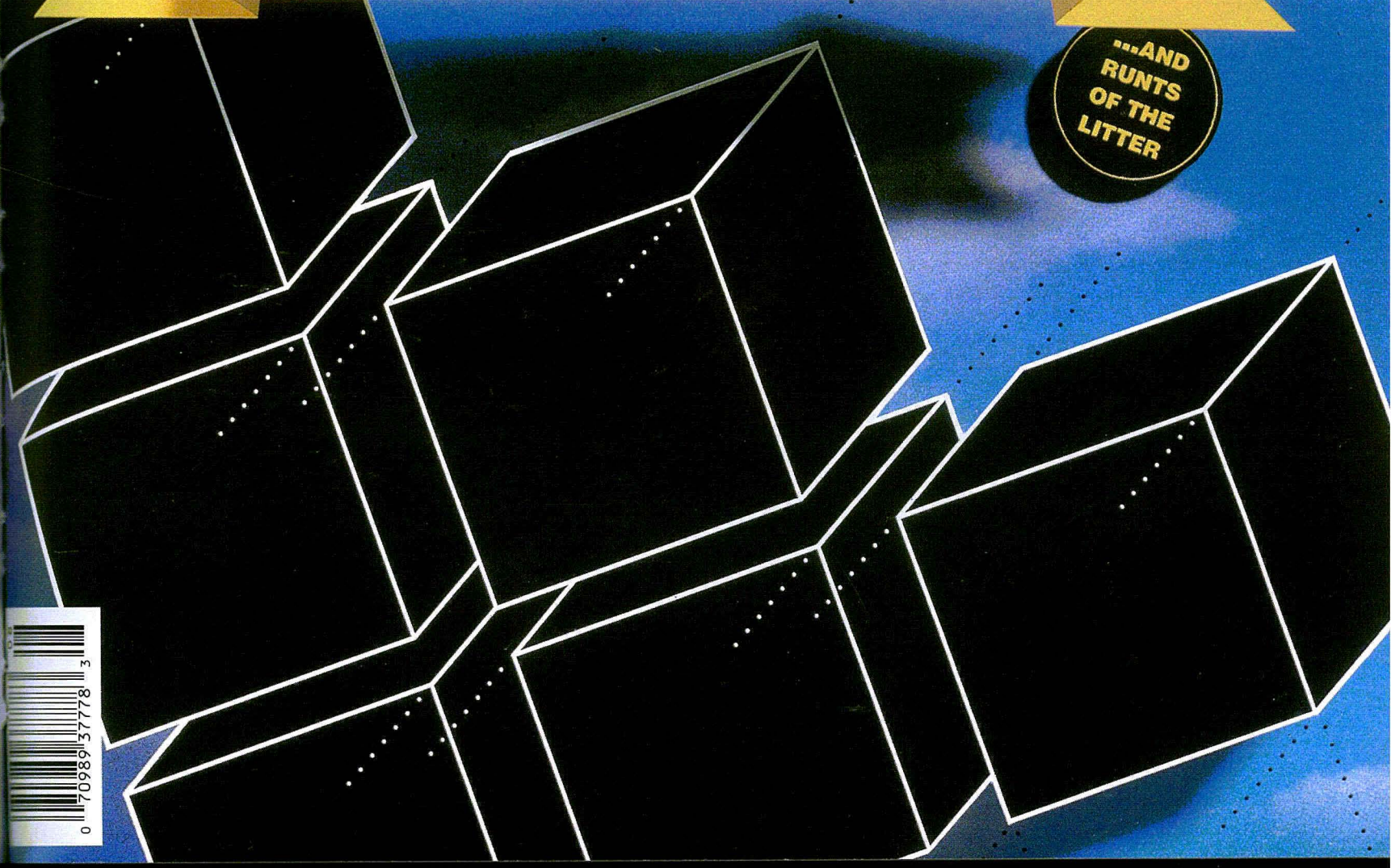
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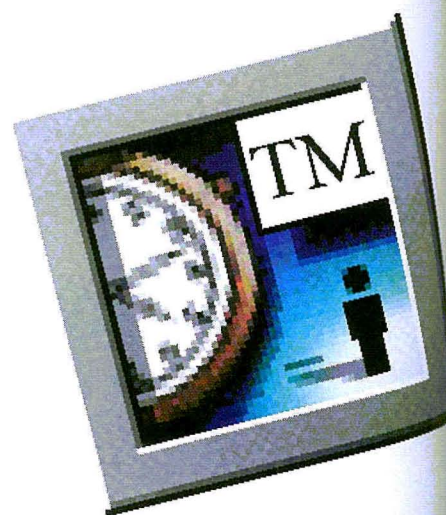
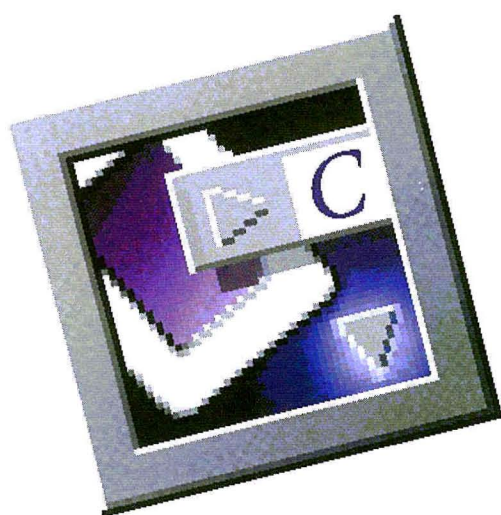
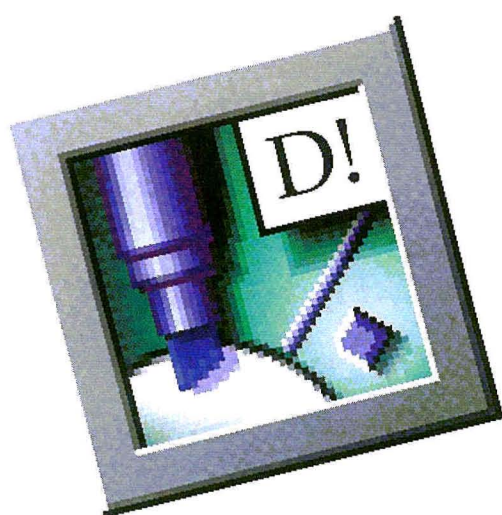


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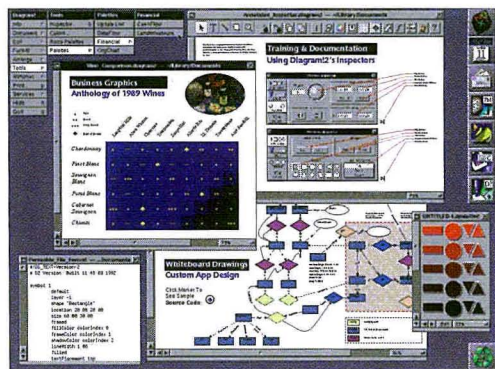


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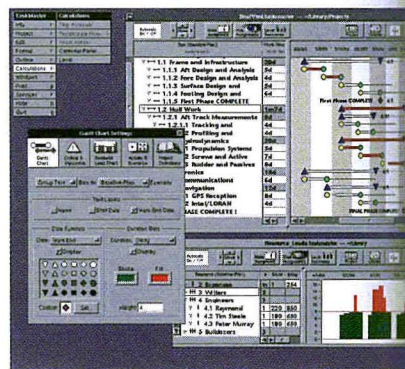
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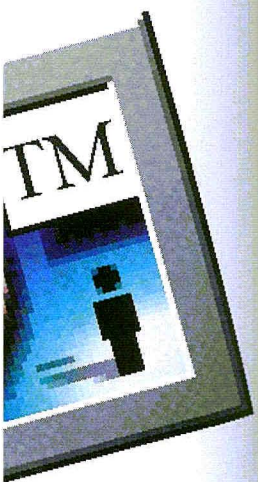
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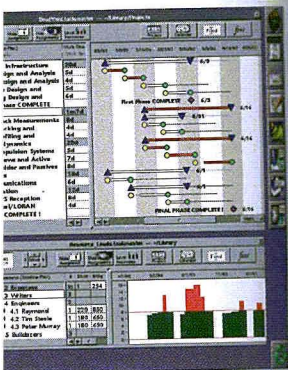
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NEXTWORLD

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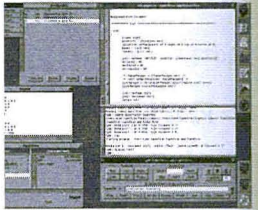
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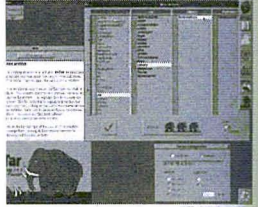
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Time for a collective sigh of relief: The gloom rampant in the community a few months ago has lifted with the announcements at Expo of the Hewlett-Packard port and PC hardware partnerships, as well as the ample numbers of prospective customers at the show. Now, after a brief summer lull (reflected in the size of this issue), the market has a window of perhaps 12 months to demonstrate new momentum. To march through that window, NeXT needs to ship enough units of NEXTSTEP to sustain a viable market for third parties and OEMs and to generate sufficient revenue to support its own operation and satisfy investors.

How many units is that? In his Expo keynote, Steve Jobs showed a slide listing 40,000 firm orders for NEXTSTEP due for delivery in the next two years. I don't think that I was the only person underwhelmed by that number. That might provide a marginal market for third parties, but it certainly won't support a robust NeXT.

I have to assume that after years of overly optimistic projections, Steve is now intentionally lowballing. But if 40,000 units over two years doesn't cut it, what's a reasonable threshold of success?

At the OS Wars panel discussion during Expo, Pencom CEO Frank King ran through a "back of the envelope" calculation, which went something like this: NeXT's costs to support its roughly 250 employees and provide a reasonable sales and marketing budget come in at around \$40 million. Figuring standard margins on software and a 50-50 split of sales between developer and user systems, NeXT needs to sell in the range of 40,000 to 60,000 NEXTSTEP units a year to reach profitability.

One problem is that, unlike most software companies and despite its indirect channels such as hardware OEMs, Ingram Micro, and NeXTCon-

nection, the primary burden for selling NEXTSTEP will continue to fall on NeXT's direct sales force. King estimated that a productive salesperson will bring in about \$1 million per year in revenue. That leads to his recommendation that NeXT beef up its sales force from about 30 quota-bearing salespeople at present to at least 50 and preferably 100.

Thus, Steve's lowball figure is about half of what's really needed for viability. The good news is that it shouldn't be too hard to ramp up to the more realistic sales goal. It just means that NeXT, and its new vice-president of sales and marketing, Warren Weiss, have to perform effectively and execute their plan. If those 40,000 orders are indeed firm, it is a strong base from which to launch a profitable software business.

On a related issue, I've heard a lot of complaining about the \$1995 and \$795 list prices for the NEXTSTEP developer and user editions. Other operating systems, the argument goes, sell for substantially less. In some cases, they are virtually given away to gain market share.

Sorry, but I don't agree with that. First, NEXTSTEP is all that NeXT sells, and there is simply no economic model

that maintains a revenue base for future development and support at DOS/Windows prices. More importantly, NEXTSTEP represents real value, for which users should be prepared to make a reasonable commitment. The \$299 non-upgradeable eval kit addresses the issue of getting it into new hands; NeXT should probably extend the offer. NEXTSTEP may be at the high end of OS pricing for now, but it's also at the high end of OS value. ♦

DAN RUBY is editor in chief of NeXTWORLD.

Running the Numbers

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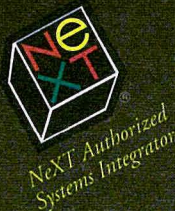
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Class distinction

In the June/July issue of *NeXTWORLD*, Chris Lozinski's remarks in "Ties that bind" are fallacious.

Windows' APIs were originally developed in C, not Smalltalk or Objective-C. As a result, customization in Windows is done with "window procs" and funky macros (instead of classes and methods), which can lead to much less maintainable code.

STEVE NAROFF
NeXT

Little guys add up

NeXT isn't going to make it unless it starts treating the little guys better. Take my case of trying to get NS for Intel running on my machine, which wasn't "blessed" by NeXT. I could barely get my sales rep to return my telephone call.

Compare that to problems with Windows. Microsoft had someone almost living at my house, even though we're just a four-computer operation. I know that NeXT isn't big enough to hold the hand of every guy that has trouble, but the attitude, "If you're not going to buy 1000 units, we don't want the hassle," has got to go.

JERALD DAWSON
Wauconda, Illinois

Go for the gusto

Does NeXT know the difference between the worth of a product and the market value of a product? Apparently not. It's the old beer drinker's dilemma. Why buy an expensive imported beer when a cheap American beer will get you loaded for half the price?

Attempting to sell NEXTSTEP in a DOS market is about the same thing. At the price that NeXT is asking for its operating system, I don't see many PC users lining up for a copy. NEXTSTEP is worth the \$800 price tag, but I won't turn down

any Mac OS or Windows programming jobs while I wait for NEXTSTEP customers to knock at my door.

DANIEL E. STEWARD
Colorado State University
Ft. Collins, Colorado

E-mail lament part deux

Rob Wyatt, living in Los Angeles, may be only mildly irritated by the lack of e-mail addresses in some *NeXTWORLD* ads (April/May). To those of us overseas, it's a definite pain in the butt. The worst

offenders are those who think they are doing customers a favor by getting an 800 number: Wake up! NeXT encircles the globe!

DAVE COYLE
Geislingen, Germany

Transparent error

Indeed we can add Virtuoso to the top five drawing applications in publishing land. But the evaluation (*NeXTWORLD* April/May) does not mention the lack of support for transparency (alpha-channel) in the NEXTSTEP Colors

panel. Instead, Virtuoso adds a very clumsy solution of cloning an object and changing its tints to give the illusion of transparency. Prehistorical.

DIEDERIC VLAMINGS
Amsterdam

For the record

In the June/July *Reviews Desk*, the price of *Keystrokes: Font & Design - Art Deco Collection* is incorrect. The price is \$150.

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E. STEWARD
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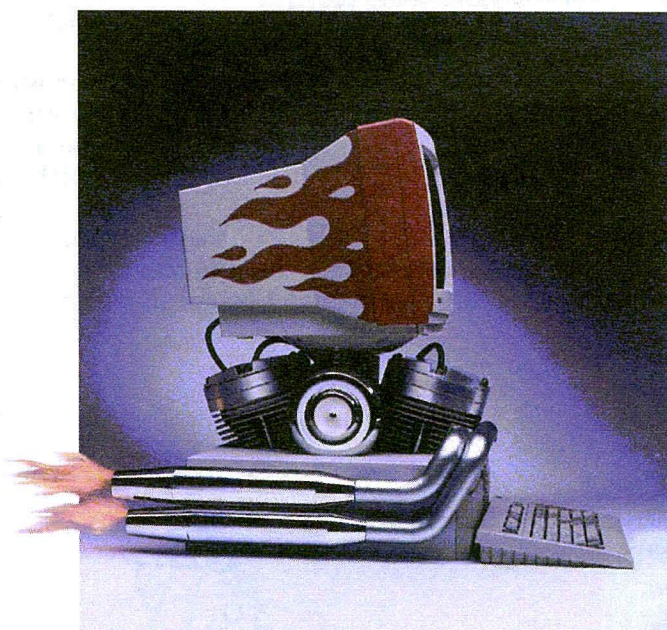
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Sales Guy

NEW TO NEXT

FINALLY, A SALES GUY. THAT WAS THE BUZZ AROUND NeXT HEADQUARTERS with the arrival of Warren M. Weiss in May as vice-president of North American sales and marketing. No matter how much vision Steve Jobs brings to the table, there's nothing quite like the "where's the world, I'll have it for breakfast" attitude a true salesperson brings to the table.



Warren Weiss brings to NeXT a track record in mainframe-software sales.

Forget Weiss's demonstrable skills in redirecting a company's sales efforts and starting a new business – two things that NeXT is currently attempting. Forget his 12 years with leading mainframe-software developer Management Science America (MSA) and its subsidiaries, including being named its youngest vice-president ever. Having a real sales guy around makes everyone feel better.

In person, Weiss, 36, lives up to his reputation. He speaks of his professional biography as a litany of quotas met and exceeded, goals topped, and tight turnarounds accomplished. Only a true sales guy can do this without boasting.

After an hour he says, "Numbers? We want to be the number-three operating system in

the world by 1995, after Microsoft and Apple, and first in object-oriented operating systems. We'll accomplish the numbers necessary to achieve that."

He wasn't always a numbers guy. Weiss earned a degree in criminology from Western Illinois University but turned down an offer from the FBI to work instead for John Imlay at Georgia-based MSA. Imlay became Weiss's mentor, and they worked together for the next 12 years.

At MSA, Weiss rose quickly through the sales ranks, operating in different markets as the company acquired various businesses. By age 26, he had over 400 people reporting to him. Most of his experience at that time centered on selling large systems to the financial industry.

Following a takeover attempt, Weiss was one of eight managers entrusted with turning the company around. The turnaround was successful, but the company was still sold to a white knight – Dun & Bradstreet (D&B) Software. He became its youngest vice-president and corporate officer ever. After 18 months, he grew restless with the staid environment of D&B and elected to move out on his own.

After six months as a consultant, he joined Continuum, a financial-software company in Austin, Texas, that required his special talent for bringing corporations back to financial health. "I seem to be attracted to companies in that position," he says. He tripled software sales in just one year and started a new outsourcing business.

Weiss was recruited from his last job after a long courtship. He wasn't interested at all while NeXT was making hardware. "The hardware business is like selling TV sets, and I'm a software baby," he says.

What clinched the deal was the opportunity to offer customers something completely new; he had seen businesses become ever more

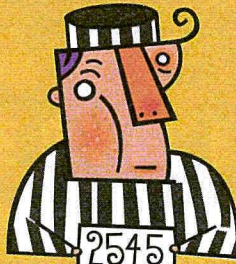
stagnant under the weight of millions of lines of COBOL code. NeXTSTEP provides the opportunity to deliver custom applications instead of fixes to existing systems that are ultimately doomed. "I spent years in the business and there was essentially no new software," Weiss says. "Mainframe software hit the client-server wall."

He looks forward to working with Steve Jobs. Calling it a "made in heaven," Weiss notes that they are the same age and have experience with success at a young age. There will be no conflict, Weiss says, because Jobs is product-focused while he is sales-focused. "If he can build it I can sell it," Weiss says.

His main goals for the short term are establishing viability by closing some major NeXTSTEP sales; creating strategic partnerships to make NeXT a full player in the future of enterprise computing; and establishing credibility with OEMs to fill channels with NeXTSTEP-based software.

Weiss describes NeXT as a start-up with characteristics of a mature company around – but blessed with lots of customers, lots of cash, and tremendous non-niche sales opportunities. Sales guy again, but it makes sense.

by DAN LAVIN



TEN MOST WANTED

A solid round of announcements at Expo put workstation-mainframe alliance, time-based media standard, early NeXTSTEP-for-Intel support, guaranteed '040 support, community solidarity, and group project management in the bag. (The first two have been announced but are shipping as products.) This month's list includes suggestions from the Most Wanted panel discussion at Expo.

RANK	LAST ISSUE	ISSUES ON LIST	ITEM	COMMENT
1	–	1	Drivers for third-party add-ons	Key to Intel success
2	9	2	Improved corporate PR	WSJ hit piece indicates
3	–	1	Expanded dealer channel	Shelf-space issue
4	5	6	NeXT management stability	New org, unproven
5	3	7	Expanded marketing message	Serious demand
6	–	1	More NS ports	Top choices: SPARC, PowerPC, Alpha
7	4	2	Aggressive IHV marketing	Jury's still out
8	–	1	Expanded user support	Concern over data research department
9	–	1	License-management facility	High on list for
10	6	2	Manufacturer of '040 systems	Old loyalties die

CONNECTIVITY/COMMUNICATIONS AND EMULATION

EXECUTOR 1.2.2
Upgrade of Mac emulation program
ARDI
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Software for SupraFAX, WorldBlitz, and Telebit fax modems
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CASE database design and management tool
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Sybase query builder, table editor, and spreadsheet gateway
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Group-scheduling application
Sarrus Software
415/364-1432

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REDMARK SOFTWARE 1.1
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Paradise Research
415/675-0910

FOUND AND MUSIC

FOUNDWORKS 3.0
Hard-disk recording, editing, and mixing package
Paradise Research
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of COBOL code. NeXT custom applications instead y doomed. "I spent 16 y no new software," nt-server wall." Jobs. Calling it a "match the same age and have ere will be no conflicts, while he is sales-focused.

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characteristics of a turn-s of cash, and tremendous out it makes sense.

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COMMENT

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WSJ hit piece indicative
Shelf-space issue
New org, unproven board
e Serious demand creation
Top choices: SPARC, PowerPC, Alpha
Jury's still out
Concern over downsized department
High on list for NS 4.0
is Old loyalties die hard



NEW IN SHRINKWRAP
MARCH 1 TO MAY 1

CONNECTIVITY/COMMUNICATIONS AND EMULATION	SCIENCE AND ENGINEERING
EXECUTOR 1.2.2	DRAFTER
Upgrade of Mac emulation program	Technical graphing application
ARDI	VVI
805/766-9115	814/234-9613
XXFAX 1.03	TOOLS AND LANGUAGES
Software for SupraFAX, WorldBlazer, and Telebit fax modems	VISUALWORKS
Black & White Software	Cross-platform, GUI-based client-server application development
802/496-8500	ParcPlace Systems
	408/481-9090
	TIME & BILLING
DATABASE AND INFORMATION MANAGEMENT	Application template for custom-workflow development
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CASE database design and management tool	612/223-8475
Schema Research Corporation	UTILITIES
415/368-8477	TIMEFLIES 2.0
DBINSPECTOR 2.3	Time-management application
Sybase query builder, table editor, and spreadsheet gateway	Mouthing Flowers
Black Market Technology	206/325-7870
718/522-5090	POWERGUARDIAN
PENCIL ME IN 1.0	Monitors power supplies and performs system shutdown
Group-scheduling application	BenaTong
Sarus Software	614/276-7859
415/364-1432	INSPECTED BY: PINNACLE
PUBLISHING AND GRAPHICS	Custom workspace inspectors
WET PAINT	Pinnacle Research
Extensible image editing and processing	602/529-1135
Pinnacle Research	PERIPHERALS
602/529-1135	BASIC SERIAL PORT KIT (FOR RELEASE 3)
REDMARK SOFTWARE 1.1	Client-server paradigm for serial communications
On-screen document-markup software	BARCODE BOX
Epitome	Hardware interface
615/675-0910	WAND-A-BAR
SOUND AND MUSIC	Software for configuring and managing bar-code readers
SOUNDWORKS 3.0	Hot Technologies
Hard-disk recording, editing, and mixing package	617/252-0088
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ILLUSTRATIONS BY GORDON STUDER

COMMUNITY

NeXT's Chasm

COMMENTARY

As a consultant reviewing NeXT's 1993 marketing strategy, I've read a lot of doomsday reports and analyses of the company's prospects. But my own assessment is that the sky isn't about to fall on NeXT. The company's destiny, in fact, is in its own hands.

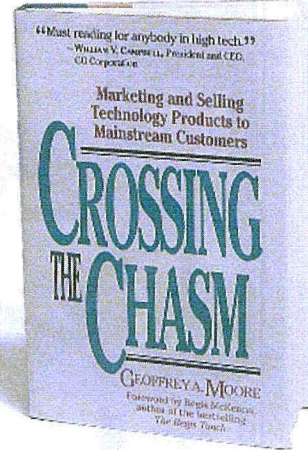
NeXT is a case study in the "chasm," a concept related to the Technology Adoption Life Cycle: Whenever a radically innovative product is introduced, it will go through a cycle of acceptance by innovators and early adopters before winning over the early majority, the late majority, and, finally, the laggards. As the cycle moves from a market dominated by visionaries to a mainstream market dominated by pragmatists, there is an adoption lull – what I call a "chasm" – during which there is fundamentally no market.

NeXT is experiencing this chasm even as I write. It has successfully captured the enthusiasm of the early market – witness the virtually universal accolades given to NEXTSTEP – but is now floundering in search of a loyal following that could give it a sustainable mainstream market. Indeed, NeXT hit the chasm head first in 1992 and, recognizing that, abandoned its hardware shortly afterward.

Whenever a company hits this chasm, everyone in the industry believes the company is finished. But this isn't the case. First, the chasm is inevitable, like adolescence – painful beyond belief but essential to growth. Second, crossing the chasm is a well-understood discipline, with well-established principles that NeXT's marketing organization is following. Third, it is far easier to cross the chasm carrying NEXTSTEP rather than a bulky Cube. Finally, the tougher the chasm is to cross, the higher the reward – if it's hard for the innovator, it's hard for the followers. The chasm can be a great moat.

To cross that chasm, the company must accomplish some key goals in the near future. NEXTSTEP is the first comprehensive object-oriented operating system, so it must position itself correctly relative to the other operating-system alternatives. In this light, its competitors are going to be Cairo and Taligent – not UNIX, not NT, not Windows. And in this competition, NeXT has a two-year head start.

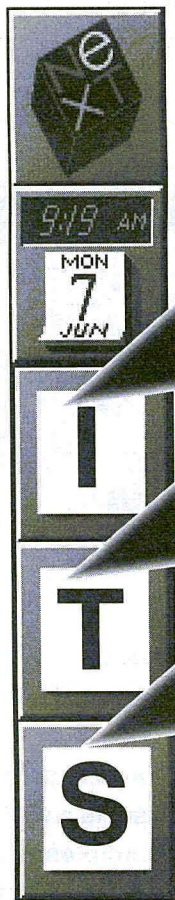
NeXT must also make objects commercially viable. Today, the universe of objects exists at the subprogram level; there are data objects and communications objects, text objects and window objects, and so forth. But at this level, objects are interesting only to computer scientists. This will all change when users hear about comprehensive libraries of objects with names like mortgage basket, currency hedge, or CD and know they can



Author Geoffrey Moore's book charts the course NeXT must take.

PHOTOGRAPH BY DAVID MAGNUSSON

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Bunker Mentality

ON THE NET

Posting was sporadic, disjointed, and somewhat subdued these past weeks, as the comp.sys.next community held its collective breath before NeXTWORLD Expo. Anxiously awaiting the "big announcements" that NeXT had promised (and worrying that the mini-announcements before Expo looked more like micro-announcements), postings went from dour ("Two months left" – about a rumor of NeXT having only two months of cash left) to uplifting ("People were writing off Steve and Apple Computer back in 1985" – a positive tirade claiming that the industry pundits doth protest too much).

In less spectacular fashion, many posters were living with the day-to-day trauma of NeXT's transition. Postings like "Help: dead NeXTstation," "Optical drive won't read optical disk," and "Keyboard dead, mouse alive. Suggestions?" mourned the gradual decay of the once great. (Can Bell Atlantic calm fears?) Meanwhile, long threads such as "Re: Can I use an ISA bus video card?" and the sad "Help! Adaptec 1542 drivers + a Gateway horror story" began to shed light on the horrors of taming wild white hardware so it runs like domesticated black hardware. The one bright note was the posted Screen Machine II information: NeXTdimension customers may finally get real-time video I/O in the PC world.

The community continues to sport interesting interactions with the outside world. A new NEXTSTEP programming book that was "proofed" by Net readers has been announced, and the Garfinkel/ Mahoney book sends out its latest errata electronically. Editors and NEXTSTEP reviewers continue to get called, written to, and talked about in numerous postings. Readers even created a Net-organized letter-writing campaign for a

PAGE 11

NeXT's Chasm

manipulate these objects – combining, trading, or monitoring them. Now the idea of objects becomes very interesting indeed, and as users commit more and more of their business practices to NEXTSTEP development, they become more and more vested in NeXT's ongoing viability.

Given this, NeXT's marketing strategy should capitalize on its head start by creating a critical mass of objects for one or more more target customer communities. And NeXT is in a very good position to do this: NEXTSTEP is not only a superb product, it is relatively mature and available now on a low-cost open-systems platform; NeXT has already established a beachhead in the financial-services industry and recognized the need for partners with broader channels of distribution and support, reflected in the HP announcement; and NeXT has found at least one systems integrator, Systemhouse, which has already set up an object factory for NEXTSTEP.

But challenges exist. NeXT must remain focused. The sales force will find plenty of opportunities outside its target markets, so the company must adopt a clear discipline about how it will invest and when it will pass over opportunities, or at least pass them under some other prime contractor.

The second challenge is money. A critical mass of objects is worth millions in the long term but is not likely to be a generator of short-term cash. Nonetheless, this is where the company must invest.

A third challenge is overcoming the Steve Jobs mystique, for it is the irony of chasm crossing that assets in the early market tend to be liabilities in the mainstream. Fortunately, however, there is a company just up the road from NeXT pointing the way to a solution. At Oracle, the Larry Ellison mystique is the process of being overcome by the integration of increasingly autonomous layers of senior executives. If the model can work there – and it is showing every sign that it will – there's no reason why it can't be ported south.

For the next two years, NeXT has the opportunity to control its own destiny. It should be able to cross the chasm, solidify its beachhead in an initial target market, and begin to branch out from there. How far that branching out will go is anybody's guess, but there is no reason at this point to set limits on it. ♦

GEOFFREY MOORE is the author of *Crossing the Chasm* (HarperBusiness, 1991) and president of Geoffrey Moore Consulting.



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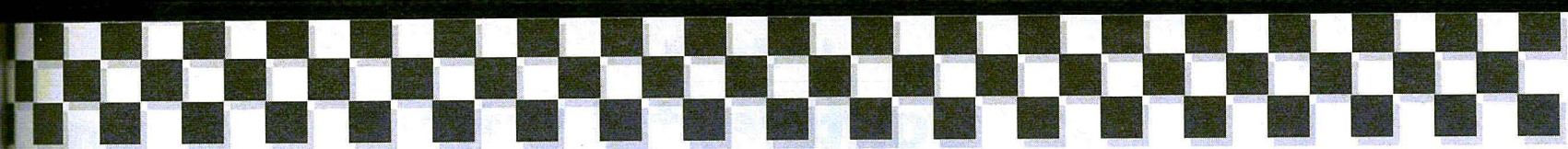
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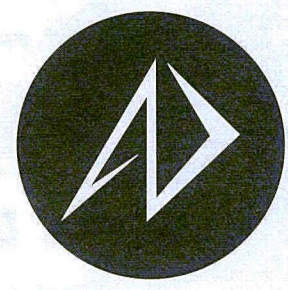


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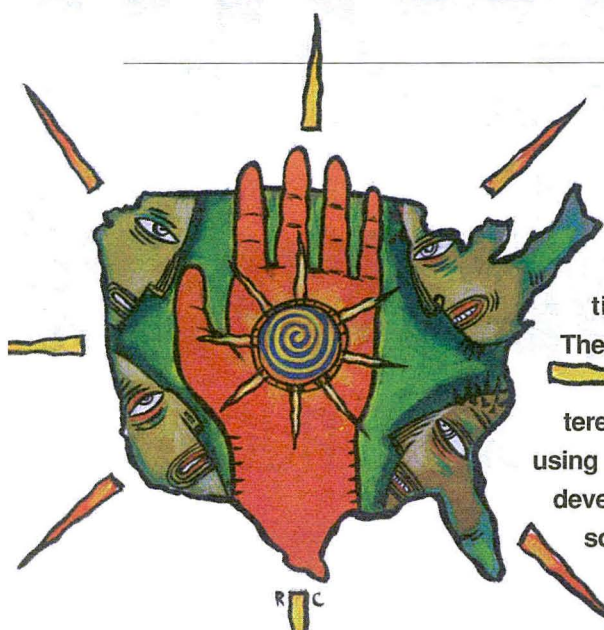
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VIRTUAL CORPORATION



space. "We need Mind-

Share and what it can do for you," says Peter

Park, the company's president.

With Park in Annandale, Virginia; Lighthouse Design founder Roger Rosner in Washington, DC; Brad Vaughan in Cincinnati; and Scott Moyer in San Francisco, each architect of this Lotus Notes-like software is able to maintain divergent lifestyles and existing relationships while contributing to the development of a product they hope will help do the same for end users.

"I work out of my home and I really love it," says Rosner. "I think it really boosts a person's efficiency. You can lead the life you were designed to live."

For Pangea Corporation, it's a case of practicing what you preach. The four people on the Pangea team are scattered across the country, using NEXTSTEP technology to develop not just a piece of software but a corporate culture that crosses the boundaries of time and

space. According to Rosner, managers may have some concerns about losing the ability to monitor their employees, but the advantages of the virtual corporation far outweigh disadvantages. "I think work should be measured in results and results only. You don't have to constantly watch the person. If you think you do, then you probably ought to fire them."

Rosner imagines a world where want ads don't exist, trust isn't an issue, and people work together in good faith to accomplish the goals of an organization. It may sound utopian, but companies like Pangea are bringing us one step closer to this special kind of virtual reality. "It's not a matter of how many hours people are putting in; it's a matter of delivering a product or a service."

While the Pangea team works to deliver its product, it relies heavily on e-mail, sending messages, source code, and, most recently, the 3-D designs for the company's NeXTWORLD Expo booth. But as MindShare gets closer to completion, it is playing an increasing role in Pangea's own communications. The program is an environment for group collaboration designed to go beyond the limitations of e-mail by providing features that make it easier to maintain discussions on an ongoing basis.

It was while serving as Air Force officers stationed at the Pentagon that the company's founders first encountered problems with existing means of tackling information exchange in a large organization. While the Pentagon is, as Park puts it, "well wired," the e-mail system that runs over those wires does little more than provide an electronic paper trail.

Unlike e-mail, MindShare provides a centralized storage place for information that can function like a company bulletin board. It can use it to post company policies, org charts, and notices that can be seen by everyone in a company. Because it allows you to send messages to a discussion group instead of an individual, you can set up open forums that can be joined by anyone at any time, even people that the sender of the message doesn't know.

Ad hoc teams can be established on the fly to work on projects either from among co-workers in the same office or from among workers in geographically remote locations (MindShare uses TCP/IP for LAN connectivity and will work over SLIP).

Like the first Pangea, the supercontinent believed to have existed more than 200 million years ago, this virtual corporation hopes to unite islands of productivity in a sea where information flows freely. Even with tools like MindShare to aid in your brainstorming session, it's all too easy for great ideas to be lost. Park's advice to those who want to explore this new means of collaboration? "Take lots of notes." ♦

by LEE SHERMAN

Spreading The Gospel

USER GROUPS

Infiltration kit. "The key is to infiltrate PC user groups, to show developers and users what is missing." That was Steve Jobs' message to the faithful at the International NeXT User Group Conference at NeXTWORLD Expo. In his keynote address, "Explosion of Users Under the Big Tent," he urged 200-odd leaders from around the world to "spread the gospel" to their using brethren.

To that end, Jobs asked to "come to NeXT with proposals on how we can help infiltrate these PC user groups." He pledged to provide whatever resources are necessary.

That very afternoon, at various NeXT (NEXTSTEP organizations International) conference sessions on leadership and member services, many group representatives began to take up Jobs's offer. Andrew Western of hAng said that people are really hard to convince because they love their Mac but PC users already have hardware... and there are a lot of them." Paul Lynch, from United Kingdom NUG, suggested that NUGs work together with PC resellers and get more active in PC-centric networks as CompuServe.

The hat. Nothing was cooler at this year's Expo than the lime-green

Bunker Mentality particularly inaccurate and negative editorial - out of 54 total letters received, 51 were positive. And finally, a poster confirming what I saw on a television in Moscow: a "CNN International" program featuring, among other fine commodities, black hardware.

To follow in the spirit of recent postings, we must all pull together to help NeXT find the next wave. By showing the world the vibrant community we've created in user groups, in Net dis-

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Spreading The Gospel

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The hat. Nothing was cooler at this year's Expo than the lime-green

and aqua-blue Expo baseball caps, and there was only one way to get them: by volunteering for NoIR. More than 120 volunteers from as far away as Europe and Japan donated more than 1750 hours to run everything from conference security to the NoIR Auction.

Volunteers ranged from NeXT Campus Consultants to curious Macintosh users; even the infamous phone phreak John Draper (Captain Crunch) was sighted at NoIR HQ. Elizabeth Mezas from FOGnug noted that "NeXT has a community and a support system that doesn't exist on any other platform, and I'm proud to be part of it." NoIR Volunteer Coordinator Al Willis, reprising his role from last year, said, "I love working with our volunteers because they give so much of themselves." Quite a few of the volunteers have already signed up for Expo '94.

Then there was the NoIR Auction. Where else could you buy a box of 300 NeXTTools (\$125), a set of dies for the NeXT monitor cable (a total of \$2300, discounted from an original retail value of \$30,000), or dinner with Lt. Sullivan (\$150)? Other items included a set of NeXT-logo Hackysacks autographed by master juggler and NeXT trainer Randy Nelson (\$250), NeXT letterhead from the Fremont factory (\$175), and a four-foot square print of the original optical disk (\$1750).

Golden Nuggets. This year's member-miles award went to NeXUS,

the Japanese NeXT Users Society, with 30 attendees who all arrived in snappy lime-colored NeXUS-logo windbreakers; and BANG, the Bay Area NeXT User Group, which has some 100 overseas members in 60 countries. Runners-up included the United Kingdom NUG, with 18 attendees, and the Vancouver (British Columbia) NeXT Users Society, with 34, eight of whom vanpooled to San Francisco in 18 nonstop hours. Conrad Geiger, NeXT's User Group representative, also presented 1993 Golden Nugget awards to over 100 NUGs, with prizes donated from 20 vendors. The current NUG census tallies some 435 groups worldwide; over 20 countries were represented at Expo, from Lithuania to Singapore.

The article. Making it through the transition from hardware to software hasn't been easy for NeXT's user-evangelists. One bombshell landed on the first day, with a negative article in the *Wall Street Journal*. Many people tried to address the dilemma laid out by Paul Sonneman at a NoIR conference on organizing NUGs: "Outside the NeXT activist community, no one can have a discussion about NEXTSTEP without running into external concerns, like the transition." Ingvar Petursson, CIO of McCaw Cellular, urged users to "fight bad press with logic." ♦

by ROHIT KHARE

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To follow in the spirit of these recent postings, we must all pull together to help NeXT find the next wave. By showing the world the vibrant community we've created in user groups, in Net discus-

sions, and at Expos, we can bring the NeXT vision (and our sense of humor) to a new set of people hungry for quality and innovation. An excerpt from the posting, "Response to people who think NeXT is almost out of business," sums it up best:

The proper response when someone asks, "NeXT? Aren't they about to go out of business?" is, "Not at all. You must be thinking of IBM." ♦

by CHARLES L. PERKINS

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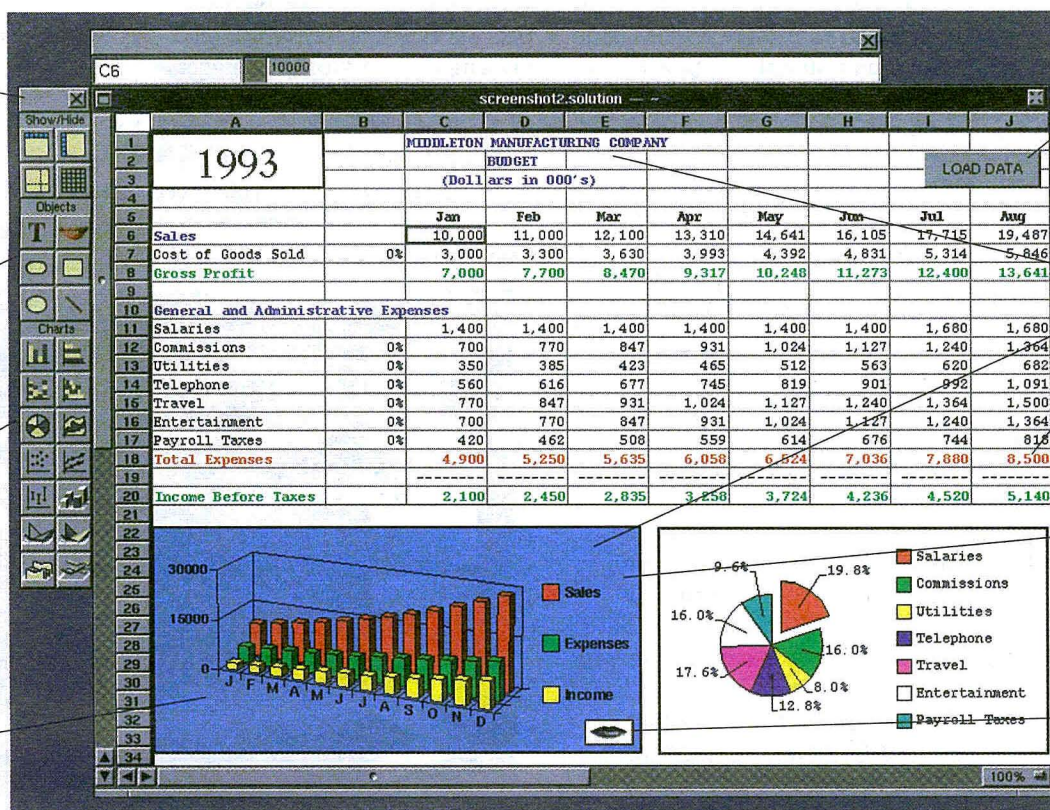
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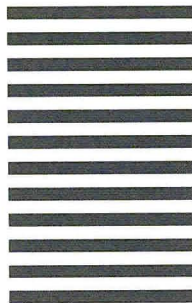
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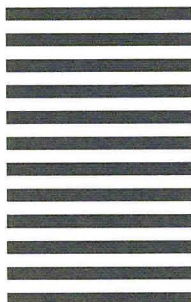
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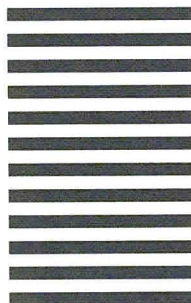
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NEWS
IN BRIEF

NeXT has signed a new long-term agreement with Integrated Media, publisher of *NeXT WORLD*. The deal extends through 1995 and covers a trademark license for the use of the *NeXTWORLD* name, customer lists, and in-box promotion for the magazine. The agreement coincides with *NeXTWORLD*'s shift to monthly frequency and a new focus on different PC hardware platforms and enterprise-wide computing.

NeXTSTEP users and developers have two new published resources. *The Complete Guide to the NeXTSTEP User Environment* (Springer-Verlag), by Michael B. Shebanek, is a book/diskette combination for both experienced users and those considering a *NeXTSTEP* purchase. Alex Duong Nghiem's *NeXTSTEP Programming: Concepts and Applications* (Prentice Hall) is a diagram-rich guide to all aspects of object-oriented design and analysis. It assumes no prior knowledge of Objective-C or *NeXTSTEP*.

Aurora Software has released an update of its QuickStart Dock-extender and application-organizer software that helps optimize limited screen space. Aimed at the new market for *NeXTSTEP* on Intel-based portables, Version 2.0 sells for \$79 and includes invisible application tiles and automatic system-load monitoring. Aurora Software: 608/231-3679.

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[CONTINUED ON PAGE 17]

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[CONTINUED ON PAGE 17]

NeXT ships solid NS 3.1, lures buyers with Eval Kit

by DAN RUBY and
SIMSON L. GARFINKEL

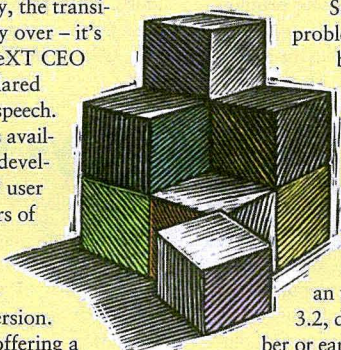
San Francisco – As promised, NeXT began its new life as a software company at NeXTWORLD Expo with the shipment of NEXTSTEP 3.1 for Intel Processors.

"As of today, the transition is officially over – it's behind us," NeXT CEO Steve Jobs declared in his keynote speech. The software is available in \$1995 developer and \$795 user versions; buyers of the developer product must also purchase a user version. NeXT is also offering a limited Evaluation Kit for \$299.

The shipping products appear solid, according to many developers present at NeXTWORLD Expo. "Personally, I think it is the stablest release of NeXTSTEP that I've ever used," said Alex Cone, president of Objective Technologies in New York.

Some remaining problems in 3.1 include bugs in DBKit and a lack of support for Insignia Solutions' SoftPC, needed for compatibility with DOS and Windows software.

NeXT said that an upgraded release 3.2, due in late September or early October, will correct those problems. The fall release



[SEE 3.1 SHIPS, PAGE 15]

Crowds turn out for Expo

by DAN RUBY

San Francisco – Preshow jitters about the turnout for NeXTWORLD Expo turned out to be greatly exaggerated. With more than 7000 attendees on the Moscone Convention Center show floor, exhibitors were generally pleased by the booth traffic.

"We received several hundred leads – much better than anticipated," said Lauren Flanagan-Sellers, president of Goldleaf Systems in Larkspur, California. "We had reseller and large-organization purchases from Asia, Europe, and all over the United States. We also made key contacts with large system integrators and resellers specializing in the government market."

According to Digital Consulting (DCI), the Expo management company, the attendance figures included 2000 registrations for the developer and user conference programs. Approximately 3500

visitors turned out to hear the opening-day keynote by NeXT CEO Steve Jobs (see the sidebar, "Glitches mar keynote"). More than 100 exhibitors displayed products on the show floor.

DCI said the attendance figures were greater than those for NeXTWORLD Expo 1992, held while

[SEE CROWDS, PAGE 15]

Glitches mar keynote

Technical problems marred Steve Jobs's keynote presentation at NeXTWORLD Expo '93.

Shortly after beginning, Jobs had to compete with background noise in the Moscone Convention Center's North wing, which is still under construction. Next, his PA system buzzed, then boomed, with reverb.

Outside the theater, the overflow crowd had a video

NeXT, HP team up

by DAN
LAVIN

San Francisco – NeXT will port NEXTSTEP to Hewlett-Packard's PA-RISC workstations under a wide-ranging agreement between the companies announced at NeXTWORLD Expo.

Though the port will not be complete until mid-1994, the companies will immediately begin co-selling NEXTSTEP in the financial-services market.

The announcement was part of a long-term strategy, called Object•Enterprise, that includes a plan to



Steve Jobs unveiling the Object•Enterprise alliance with HP.

develop a Portable Distributed Object (PDO) system running on servers over mixed networks.

"This deal was essential for NeXT. HP has access to market channels NeXT needs," said Andrew Allison, a workstation-market analyst [SEE HP, PAGE 17]

Lights, camera, action

by LEE SHERMAN

San Francisco – Declaring that "R & D is alive and well at NeXT," Steve Jobs wowed the NeXTWORLD Expo audience with the first demonstrations of NEXTime, software for real-time video compression and audio synchronization, and Photo CD support.

"NeXT has been the leader in providing an object-oriented multimedia development platform that incorporates virtually all of the critical media types, from images

to CD-quality sound and photographs. Real-time video is clearly the next addition we need to make," said NeXT Director of Product Marketing Brett Bachman.

Similar to Apple's QuickTime and Microsoft's Video for Windows, NEXTime allows users to store video sequences on a hard disk, where the sequences can easily be incorporated into other applications. The key difference is the software's capability to support symmetrical compression and decompression of video. QuickTime can take from five to ten times longer to compress as it does to decompress, depending on the method used. On current '486-based machines, a typical 320-by-240-pixel NEXTime movie will play at 24 frames per second, including sound.

According to Bachman, this real-time capability will allow development of more advanced applications for video editing and teleconferencing.

NEXTime's other improvements over current video technologies include support for CD-quality sound, larger window sizes,

[SEE LIGHTS, PAGE 15]

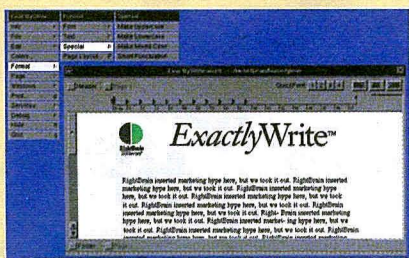
PRODUCTS

WP without frills

San Francisco – Hoping to raise a new word processor standard for mixed-environment NEXTSTEP sites, RightBrain Software introduced its new word processor, ExactlyWrite, for Intel and NeXT platforms at May's NeXTWORLD Expo here.

The program is unrelated to RightBrain's page-layout application, PasteUp, but was written using the NEXTSTEP Text object. It was designed as a baseline word processor for letter and memo writing in heterogeneous environments.

Through a licensing agreement



ExactlyWrite gets back to basics.

with Appsoft, ExactlyWrite will be able to read from and write to WriteNow files.

ExactlyWrite will sell for \$129, with a per-seat discounting scheme. A shipping date for the software had not been determined at press time.

RightBrain: 415/326-2974. ♦

See next month's issue for more Expo product news

Talus delivers Russian code

San Francisco – Talus Imaging and Communications Corporation showed a slew of new products at Expo, including the fruits of its Moscow operations.

Retina is an application that drives the entire line of IRIS high-resolution ink-jet color printers. LeafLink is a set of tools for scanning from LeafScan high-resolution film scanners. MatchMaster is software for driving the Super-Match ProofPositive color printers.

Also joining the fold is a new encryption standard, developed entirely within Russia. This product has important ramifications for multinational corporations needing encryption not affected by strict U.S. export regulations.

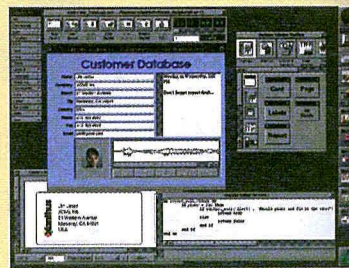
FastKey provides a total solution for bilingual publishing between English and another language. With new Cyrillic fonts, that other language can be Russian. Typing Czar is software for learning how to type with the help of progress indicators. Talus: 713/561-0700. ♦

Xanthus seeks Celebro-ty

San Francisco – Celebro, a new multiuser flat-file database from Stockholm-based Xanthus International, made its North American debut at NeXTWORLD Expo.

The application features multiuser access; form- and label-design tools; multiple data, table, report, and field types and views; multimedia support; drawing tools; and support for user palettes.

Databases can be customized using CScript, the Xanthus scripting language based on the Xanthus Common Language (XCL) used in all the company's products. CScript also supports exter-



Celebro offers flat-file database accessibility along with user customization.

nal functions written in XCL or Objective-C.

A Celebro Professional version allows users to create stand-alone database applications.

Due to ship in September, Celebro and Celebro Professional will sell for \$695 and \$995, respectively.

Xanthus International: 468/635-3000; or e-mail: celebro@xanthus.se. ♦

Lighthouse takes project management to task

San Mateo, CA – Filling a gap in the NEXTSTEP application suite, Lighthouse Design showed a new project-management program called TaskMaster at Expo. It also shipped its Foundation Classes, a library of Lighthouse objects.

TaskMaster is a comprehensive project-management application

that allows users to get a handle on scheduling, planning, and resource management. It was in limited release at press time; Version 2.0 will ship widely for \$1295 at the end of Q3 this year.

The Foundation Classes are a class library that, unlike most user-interface-driven ObjectWare, focuses on storing items in the background of programs. This key task is not addressed by the AppKit. ♦

Video to go

NeXT's decision to drop hardware and produce a version of NEXTSTEP for Intel-based PCs is allowing developers to put NEXTSTEP front ends on low-cost video-capture cards.

Imagine Multimedia's Video-Grinder, introduced at NeXTWORLD Expo, lets you record digital video clips to your hard disk by using Creative Labs' Video Spigot card. The software will rely on Imagine's proprietary Flix video-compression technology to create clips that can be used with Callisto, Imagine's multimedia authoring software.

Making its American debut at Expo, Screen Machine is a NEXTSTEP version of Europe's leading video-capture card and includes software for frame grabbing and cut-and-paste editing of captured video, as well as the capability to view live video in a window. ♦

On-screen Performance art

Performance, the "information theatre" tool from Boston-based Object Horizons, takes messaging between objects and icons to a new height. "Actors" move around "stages" and are capable of holding, launching, mailing, or distributing everything from local documents to remote folders. "Directors" can be loaded or written in Objective-C to control communications between actors.



Altsys readies Virtuoso 2.0

San Francisco – Not resting on its laurels, Altsys Corporation came to Expo with an updated version of its Virtuoso drawing program. The company also teased users with promises of a "secret" feature scheduled to be announced for various platforms at the beginning of July.

Version 2.0 features full NEXTSTEP 3.1 compatibility for both black and white hardware, as well

as Services support, object-linking capabilities, and Pantone color support. Also included are a spelling checker, intersection and union commands, and a path utility similar to the one found in Illustrator 5.0 on the Mac for simplifying paths created via auto-tracing or on another platform.

Altsys: 214/680-2060; or e-mail: virtuoso_info@altsys.com. ♦

Engage! Desktop launches

by DAN RUBY

Menlo Park, CA – Millennium Software Labs introduced Engage! Desktop, a complete reworking of its existing Dock extender, as a desktop environment for managing and personalizing the NEXTSTEP workspace.

The program's use of a traditional desktop metaphor allows placement of applications, files, and folders anywhere on the screen for easy access. Any number of named custom docks can be created. Files can be dragged and dropped from desktop folders into Mail and other applications without using the File Viewer.

"The idea is to enhance the workspace, not replace it," said Millennium President Scott Love. "By providing easier access to

files, it lets you work smarter.

The program is aimed at NEXTSTEP systems but is especially useful on portable computers with limited screen real estate. A Smart Level feature can be used to hide and unhide running applications as users switch between different docks.

Engage! Desktop can be set to automatically launch applications and open documents at startup. The program uses color to organize work projects or highlight frequently used documents, and includes a built-in screen saver.

Engage! Desktop was due to ship for Intel and NeXT systems by the end of June for \$150. Registered owners of Engage! can upgrade for \$25. Millennium Software Labs: 415/321-3720; or e-mail: info@millennium.com. ♦

3.1 ships

[FROM PAGE 13]

should also include drivers for a wider array of sound, video, Ethernet, and disk-controller cards found in the PC marketplace.

In his speech, Jobs positioned NEXTSTEP as "one of the few hopes to create an alternative standard" to Microsoft Windows NT. Citing NEXTSTEP's support for distributed objects and its integrated Database Kit, Jobs said NEXTSTEP is the industry-leading system for rapid development of custom applications.

NeXT users can purchase PCs with NEXTSTEP pre-installed from a number of leading PC manufacturers, system integrators, and hardware resellers. Users may also purchase shrinkwrapped copies of NEXTSTEP through value-added resellers, software resellers, and directly from NeXT.

What's

NEXTSTEP 3.1 for Intel Processors

NEXTSTEP User's Guide
Release Notes booklet
Installing and Configuring
Here's How booklet
Support & Education
Third-Party Products
CD-ROM Installation
Free Upgrade Coupon

NEXTSTEP Developer

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Development Tools and Libraries
Object-Oriented Programming
C Language book
Programming Interface
NEXTSTEP General Reference
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Supplemental Release
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Free upgrade Coupon

NEXTSTEP Evaluation Kit

NEXTSTEP Release 3.1
NEXTSTEP User's Guide
NEXTSTEP Developer's Guide
Half-price coupon for future
NEXTSTEP Advantage
NEXTSTEP Programming
Michael Mahoney

Lights

[FROM PAGE 13]

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"We have more support from the PC industry than any non- Microsoft product has ever had," Jobs said.

The Evaluation Kit program introduced at Expo is designed "to build momentum and encourage developers to develop NEXTSTEP applications so they can experi- ence the the productivity gains from using NEXTSTEP to develop client-server applications," said Brett Bachman, NeXT's director of product marketing.

The special offer, which is lim- ited to one copy per customer and expires on July 31, includes both the user and developer versions of NEXTSTEP 3.1. While regularly priced copies of NEXTSTEP 3.1 include an upgrade to Release 3.2, Evaluation Kit software is not up- gradeable to future versions of NEXTSTEP. ♦

What's in the Box

NEXTSTEP 3.1 for Intel Processors

NEXTSTEP User's Guide
Release Notes booklet
Installing and Configuring booklet
Here's How booklet
Support & Education Catalog
Third-Party Products Catalog
CD-ROM Installation Disk
Free Upgrade Coupon

NEXTSTEP Developer

User Interface Guidelines book
Development Tools and Techniques book
Object-Oriented Programming and the Objective C Language book
Programming Interface Summary book
NEXTSTEP General Reference, Volumes 1 and 2
Support & Education Catalog
Supplemental Release Notes booklet
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NEXTSTEP Evaluation Kit

NEXTSTEP Release 3.1 for Intel Processors CD-ROM
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NEXTSTEP Developer CD-ROM
Half-price coupon for full technical documentation
NEXTSTEP Advantage Kit with booklet, video, and diskette
NEXTSTEP Programming book by Simson L. Garfinkel & Michael Mahoney

Lights

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dance at the Expo would be ex- tremely light.

Show organizers said that NeXTWORLD Expo will return to Moscone Center next year, June 20-22, 1994. ♦

NeXT plan to rebuild Europe

by CLAIR WHITMER

San Francisco — NeXT used NeXT- World Expo to demonstrate its commitment to the European mar- ket, more than one year after the company sharply cut back its Euro- pean organization, said Bernhard Woebker, vice-president of NeXT Europe.

The company announced a post-hardware reorganization of its European distribution, under- scoring the market's importance with a surprise visit from Steve Jobs to the Expo's three-hour Euro- pean showcase session.

"I think we've figured out what we're doing now. Things should be relatively stable from here on out," said Jobs, addressing the approximately 80 European devel- opers in the room and stressing "how important having a global product is for us."

Woebker estimated that 40 percent of NeXT's business may come from Europe by the end of this year. NEXTSTEP for Intel is now shipping with support for six European languages.

NeXT has adopted an indirect distribution model for the Euro- pean market, selling only to OEMs and VADs (value-added distribu- tors) who in turn recruit VARs. The channel now includes about 15 distribution partners, includ- ing a new distributor for Scandi-

navia and a Europe-wide service company, Sorbus.

"We are not in control of the third layer of distribution and we don't want to be," said Woebker. This indirect system may eventu- ally serve as a model for the North American market, he said.

A strong contingent of Euro- pean developers — including Xan- thus International from Sweden,

Cub'x Systèmes from France, Cube Informations-Systemes and tms GmbH from Germany, and Talus Imaging and Communica- tions Corporation from Russia — introduced new products at the show.

U.S. reseller Alembic Systems International announced distri- bution agreements with several other European developers. ♦

NEXTSTEP wins at ObjectWorld

by ROHIT KHARE

San Francisco — Capping a strong NEXTSTEP presence at Object- World '93, the risk-management system from Vienna-based Credi- tanstalt Bankverein was honored at the second annual Computer- world Object Application Awards as the best application utilizing reusable components. The afs:TRADE object kit from Ander- son Financial Systems (AFS), another NEXTSTEP-based appli- cation, was a finalist in the same category.

Award-ceremony MC Steve Jobs said afterward, "I think it's great that two out of the three finalists in the most significant category were based on NEXT- STEP. It shows that NEXTSTEP

is the king's road."

Werner Staringer, the system's designer, began research on the project in the Financial Markets Laboratory at the Technical Uni- versity of Vienna. The project reuses several custom objects as well as application APIs to lever- age, for example, the capabilities of Lotus Improv and Wolfram Research's Mathematica.

Elsewhere at ObjectWorld, NeXT and ObjectWare developers promoted NEXTSTEP by focusing on customer success stories. Sev- eral panels discussed NEXTSTEP projects at Fidelity Investments, AFS, Systemhouse, and other sites.

Separately, IBM, HP, and Sun- Soft debuted a new architecture for object interchange and messag- ing, System Object Model (SOM), along with Distributed SOM for networked objects. It was not clear at press time what effect, if any, HP's commitment to DSOM might have on the HP-NeXT technol- ogy partnership and NEXTSTEP's Portable Distributed Objects. ♦

Mentors give boost on NS learning curve

by PAUL KARON

Along with the revolution in appli- cation development that NEXT- STEP is bringing to the computing world, a new method of provid- ing consulting expertise is gaining popularity: mentoring.

Rather than concentrating on traditional consulting methods, NeXT and two third-party con- sulting firms have begun deliver- ing educational instructors to cus- tomer sites for extended mentoring programs.

According to a NeXT spokes- woman, the program is designed as a transfer of knowledge instead of doing any actual development work for the company. Corporate developers learn object-oriented programming by working on the prototype of their own mission- critical custom application.

The third-party programs are designed to provide custom tech-

nical support and increase the quality of NEXTSTEP resources in the community. Companies can then fully integrate object- oriented programming methods into other software projects. "We think this kind of program can help people climb the technology learning curve as fast as possi- ble," said Joe Ortiz, manager of product marketing for Pencom Software, the Austin, Texas-based integration firm.

"The idea is basically to have them work side by side with our people developing applications," said Greg Clemmons, director of systems integration for System- house, which in April opened the Object Technology Center in Boul- der, Colorado, to act as an object- oriented training and resource center. "We'll take someone for two or three months and, if we can, maybe put them on a real pro- ject we're working on." ♦

New sales VP

San Francisco — NeXT named William G. Wesemann as its new vice-president of North American sales on June 22. He will report to Warren Weiss, NeXT's VP of North American sales and market- ing, and be responsible for direct sales and sales through channels.

A former minor-league pitcher, Wesemann, 36, said, "We'll pitch around Microsoft and face Sun with our Hewlett-Packard [alliance]."

He was most recently a VP of sales and marketing at Knowledge- Ware, a mainframe-software maker currently in transition to client-server development-tool sales. "I'm familiar with the alternatives to NEXTSTEP, and our one integrated environment is vastly superior," he said. ♦

NEXTSTEP PCs appear in black and white

by PAUL KARON

San Francisco – The white boxes are here, and, as Steve Jobs might say, they really do just work.

At least ten PC makers at the Expo rolled out machines specially configured and tuned for NEXTSTEP.

The companies make up an impressive cross-section of the PC-manufacturing world: Compaq, Data General (DG), Dell, Digital Equipment Corporation (DEC), Epson, Hewlett-Packard (HP), Lucky-Goldstar, NCR, NEC, and Siemens-Nixdorf. Some smaller companies are also vying for a place in the NEXTSTEP market: eCesys, elhöm, and Omegabyte.

"We've been working with NeXT for ten months to port NEXTSTEP [to the '486]," said David Kang, general manager of Lucky-Goldstar International (America), of Fremont, California. "It was quite painful, but now we can enjoy the good results."

Several of the machines sported one-inch-square, black-and-white stickers that identified them as "NEXTSTEP certified," a sign from NeXT that the machines and the configurations can safely support the operating software.

Dell, Epson, DG, Siemens-Nixdorf, and NEC are designated OEMs and will sell their machines with NEXTSTEP preloaded at the factory. Compaq, HP, and Lucky-Goldstar are among the firms that will load NEXTSTEP in the channel under a variety of configurations.

Compaq and NEC also broke new ground, demonstrating that NEXTSTEP can run on notebook PCs. In particular, crowds pressed into the NEC booth, where they watched NEXTSTEP running on the firm's UltraLite Versa '486 notebook.

The small-screened notebook PCs have also created a software niche for utilities to manage display real estate.

Software maker Pinnacle Research, for example, has a solution with VirtSpace 3.0, a program that allows the creation of a "virtual workspace" that enables the PC to display smaller regions of the total NEXTSTEP workspace.

Some of the smaller manufac-



'486 vendors moved quickly to pick up NEXTSTEP customers.

turers – eCesys, elhöm, and Omegabyte – are looking to carve out a market niche by offering ebony '486 towers.

Larger manufacturers, such as HP and DEC, will also offer black boxes as an option at the request of corporate customers. ♦

Customers show faces

by ELIOT BERGSON

San Francisco – NeXTWORLD Expo built it and they came. For the first time, corporate customers emerged from behind press releases, extolling the virtuous reality of NEXTSTEP in a short keynote video, on several user panels, and all over the show floor.

Most importantly, NeXT CEO Steve Jobs announced signed contracts for 40,000 units of NeXTSTEP for Intel. The list featured Abbot Laboratories, Continental Computer Systems, VideoNet, Logibec, DILAN, Comnetix Computer Systems, and Skyway Freight Systems. Corporate representatives from all over the world walked the show floor, including, according to sources, executives of Fidelity Investments, the Boston-based manager of the world's largest money-market funds.

Jobs showed a keynote video that featured CIOs from McCaw Cellular, securities trader Swiss Bank Corporation (SBC), integrator Systemhouse, and Chrysler Financial Corporation talking about using NEXTSTEP in their organizations.

A first-ever CIO roundtable at the user conference featured representatives from the U.S. Air Force; Val Verde Unified School District; Systemhouse; SBC; and Bozell, Jacobs, Kenyon, and Eckhardt. ♦

RightBrain to offer Adobe DTP products

by RICK REYNOLDS

San Francisco – Adobe Systems has signed a letter of intent to allow RightBrain Software to develop and market Adobe's Illustrator and TouchType NEXTSTEP products. The surprise announcement delighted the publishing community, which was concerned that Adobe would drop support for these publishing staples as NeXT moved onto additional hardware architectures.

"I think this is an ideal situation and a big win for NEXTSTEP publishing customers," said Julie Saffren, manager of strategic relations for NeXT.

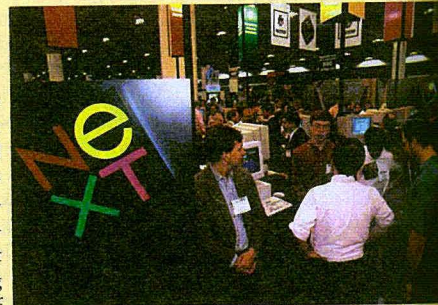
No timetable was announced at press time for the final agreement to take effect. ♦

NeXT spins message

by DAN LAVIN

San Francisco – NeXT relied on a mix of the old and new to communicate its updated marketing messages at Expo, including heavy use of representatives from partners and a newly designed booth. Revised catalogs demonstrated the depth of third-party software offerings.

Despite overlapping dates with Spring Comdex in Atlanta, all major hardware partners were represented by senior managers. These managers were actively involved with NeXT in meeting with the press and customers alike. Presentations by HP and Intel figured heavily in the Expo program.



NeXT waved goodbye to its old booth and hello to new users.

After five years, the familiar "wave" booth, designed to showcase hardware and emphasize a common theme, was replaced by an open booth stressing diversity of hardware solutions and openness in general.

A training center and executive briefing sessions were designed to reach out to customers.

Sales of NeXT-licensed accessories reinforced the community image of NeXT, while a more serious sales booth let attendees know that new products were available immediately on a cash-and-carry basis.

The familiar third-party catalog was updated for Expo, with 600 products represented. The Object Ware catalog featured 1400 individual items for sale, up from last year's 172. ♦

NeXT names two to board

Redwood City – Oracle Corporation Chairman of the Board Lawrence J. Ellison and Hambrecht & Quist President Daniel H. Case were named to NeXT's board of directors on May 25. They join Keiichi Uno, of Canon, and NeXT CEO Steve Jobs, the only incumbent board members.

Ellison is CEO of Oracle Corporation, the third-largest software company in the world. Case's company is well-known for financing high-tech companies, including handling the initial public offer-



Lawrence J. Ellison
Oracle Corporation



Daniel H. Case
Hambrecht & Quist

ing for Apple Computer. According to Jobs, both will concentrate on strategic and operations issues involved in helping the company grow. ♦

New developer program

by DAN LAVIN

Redwood City – NeXT rolled out a new NEXTSTEP Registered Developer Program (NRDP) and a new NEXTSTEP Registered Consultant Program (NRCP) during Expo. Together, NRDP and NRCP replace the former registered-developer program, and all current registered developers must reapply if they are not sent a pre-approved application in the mail.

"With our transition to software, we needed to refocus our developer programs," said Julie

Saffren, NeXT's manager of developer programs.

The new programs both include discounted pricing on NEXTSTEP education, support, and software, several technical-support publications, and monthly mailings. NeXT will also facilitate direct- and co-marketing opportunities. The programs do not include the separately administered technical-support developer phone lines.

The programs each cost \$250, but the NRDP is free upon shipment of a product for NEXTSTEP. NeXT: 800/879-6398. ♦

HSD to focus on software

San Francisco – One prominent no-show at NeXTWORLD Expo was HSD US, which was undergoing a shake-up in the wake of NeXT's move to software.

"NeXT's decision caused many small companies like ours to change strategies, too," said Daniel Marquez, HSD's newly named president. He added that the company will cease sales of scanner hardware to focus on high-end scanning and document-processing software.

HSD's software, including PowerScan, HSD Spell, and OCR Servant, will be upgraded for NEXTSTEP 3.1, Marquez said. A new version of PowerScan will be released soon, he added.

As part of the reorganization, HSD relocated to Sunnyvale, California, and can be reached at 408/774-1400. ♦

BRIEFS Continued

Second Glance will start shipping this fall Version 2.0 of its ScanTastic image-scanning software for Intel and NeXT platforms. Supporting scanners from HP, Epson, and XRS, the \$295 package will feature copier and fax functions that allow images to be scanned directly to a printer or fax-modem and a batch-mode command that can produce multiple originals on scanners with auto-document feeders. Second Glance: 714/855-2331.

Pinnacle Research is shipping its Transfer application for tapping into NEXTSTEP mail servers via modem from remote locations. The program allows mail messages to be read as plain text or NeXTmail and new messages to be composed off-line and sent via NeXTmail. The software sells for \$249. Pinnacle Research: 602/529-1135.

Metrosoft is now shipping Version 2.0 of MetroTools, its popular integrated set of utilities. The update features a Dock extender for group applications and a screen saver that supports an animated workspace or slideshow backdrop, in addition to the archiver, file locator, sound importer, font converter, and development shell for creating new tools found in the original version. The new version sells for \$89 but is free for registered users. Metrosoft: 619/488-9411.

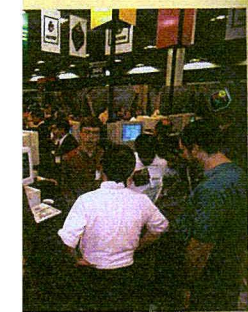
Xedoc Software Development has released HP and OSF/1 versions of its NetInfo network-administration tools. In addition to Xedoc's earlier offerings for SPARC and Auspex-based networks, system administrators can now manage NEXTSTEP networks on HP PA-RISC workstations and DEC's Alpha-based machines. Pricing for both packages starts at \$2500. Xedoc: 617/3696-2490; or e-mail: netinfo@xedoc.com.

NeXTWORLD Extra is a regular section of NeXTWORLD magazine. It is published monthly by Integrated Media, a subsidiary of IDG Communications, 501 Second St., San Francisco, CA 94107. Lt. Sullivan's column and articles about unannounced NeXT products are reported and written by contributors without guidance from the NeXTWORLD staff.

Editor: Dan Ruby; Managing Editor: Eliot Bergson; News Editor: Dan Lavin; Technical Editor: Simson L. Garfinkel; Layout Chief: Beth Kamoroff

NEWS

message



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HP

[FROM PAGE 13]

and consultant.

The first phase of the alliance involves selling HP Vectra PCs with NeXTSTEP combined with HP servers running HP-UX. In the third quarter, beta releases of NetInfo, NeXT's network-management software, will ship for HP servers, along with PDO.

The alliance may present a formidable challenge to other competitors in the financial market. "It's a real Sun killer," said Jim McCrory, a marketing manager at NeXT. "We stopped Sun pretty well with our software running on '040 hardware. Now we have the industry-leading hardware solution behind us."

But while NeXT eyes the client side, HP's focus is on complete systems. "The real battle is for the whole enterprise, where we compete with IBM and DEC, not just at the desktop," said Ruann Ernst, HP's director of strategic business for the general systems division.

HP is the first, but not exclusive, partner in Object•Enterprise, a broad initiative promoting object-oriented technology for enterprise-wide solutions. Instead of traditional corporate systems purchased from one vendor, NeXT envisions customers grouping together com-

ponents from many vendors.

Other categories of Object•Enterprise partners include networking, database, and telephony vendors, McCrory said.

NeXT will sell PDO as a separate product (see the sidebar, "When is an object portable?"). A typical initial use for PDO would be encapsulating complex compute-intensive tasks for securities trading on a non-NEXTSTEP server.

When is an object portable?

by SIMSON GARFINKEL

Redwood City — First introduced with NEXTSTEP 3.0 over a year ago, NeXT's distributed-object system allows objects in different programs to exchange messages as if they were running within a single application. Programs communicating through distributed objects can reside on the same computer or communicate over a network.

NeXT's distributed-object system has only been available on computers running the complete NEXTSTEP OS. With NeXT's Portable Distributed Object (PDO) system, it will be possible for client

NeXT scores at Comdex

by CARLOS BOARDMAN

Atlanta — The same week that NeXT played to the faithful at NeXTWORLD Expo in San Francisco, it also ventured into enemy territory here at the Microsoft-dominated Comdex Spring.

While the company did not have a booth on the floor of the Georgia Convention Center, more than 500 resellers and corporate buyers trooped through the company's third-floor meeting room on the first day of the show.

They viewed a video of Steve Jobs's NeXTWORLD Expo keynote speech and saw NEXTSTEP running on PCs from Dell, Compaq, Epson, and Hewlett-Packard—and many came away impressed.

"NEXTSTEP is object-oriented and is available now. It has the capabilities we need to develop custom applications," said Ernie Wright, an MIS manager with First Colony Life Insurance of Lynchburg, Virginia.

Other attendees noted NEXTSTEP's immediate availability, in contrast to delays in the shipment of Microsoft's Windows NT. "NT is way late, and our users have been waiting for the commercial release of NEXTSTEP for Intel," said John McEwan, president of Technology Advancement Group of Chantilly, Virginia. "Fact is, there's nothing that competes with NEXTSTEP for Intel right now."

Sullivan's private life and public key

Like many others, Lt. Sullivan came out of Expo with his batteries recharged and a full bag of tips. For those of you who were there: No, that wasn't really Sullivan taking a public turn during the BoB ceremony, but he did work the cocktail party for inside information. The nearest he came to an unmasking was during the NoIR auction. For a mere \$150, the high bidder bought lunch with the Lieutenant. The lucky winner, though, has to sign a nondisclosure before the gazpacho is served.

Bob is not the only one who values his privacy; so do his confidential tipsters. The good news on that score is Confidant from Ensuring Technologies, an enhancement to Mail.app that adds military-grade encryption based on the RSA technology. The expected price? Less than \$100. It should ship before the end of summer. In the meantime, Sullivan can begin receiving encrypted mail immediately. Use the public key printed at the bottom of this column.

Ensuing's window of opportunity is fairly small, since NeXT is making a lot of progress on its new and improved Mail. Mail II covers all of those things the original Mail missed, like text quoting and "sig insertion," plus has goodies like full indexing of mailboxes. What is uncertain is what NeXT plans to do with it.

Now that NeXT landed the big one with HP, it is taking pains to assure its partners that Object•Enterprise is not exclusive to its workstation partner. Data General, DEC, and NCR all want a piece of the action with their servers. DG, for example, got a jump in the Portable Distributed Object area by reverse engineering NeXT code. The company demoed the results at Expo and may ship it for Aviiion servers by August.

Now is Digital satisfied with a mere marketing partnership. The company apparently dangled a lucrative sum at NeXT for a NEXTSTEP port to the Alpha chip. With its current full plate of projects, NeXT took a pass for now. Likewise, PowerPC and SPARC have dropped off the scope as NeXT dedicates scarce resources to the HP port.

Down in the Bunny hutch, the sales and marketing reorg is underway. New sales VP William Wesemann is just the first of a new tier of management reporting to chief rabbit Warren Weiss. It seems that the top requirement for direct sales at NeXT is experience in the mainframe-software business.

Word is that the big mutual fund company that had numerous reps at Expo

has approval to prototype a NEXTSTEP-based retail workstation. If the proto flies, the company could be ready to go forward with up to 3000 systems beginning this fall. Sully's source says it's NeXT's deal to lose.

On the distribution front, there seems to be significant start-up pains. Ingram has been having trouble filling orders, especially for NEXTSTEP Developer. With a couple of exceptions (notably Epson and DG), NeXT's hardware partners are only now getting their systems into shape and in the channel. On the other hand, NeXT has had a huge response to the Eval Kit offer. The one-thousandth unit went out the door by mid-June, leaving NeXT potentially short of supply before the offer expires. Apparently, the company put together only 2000 of the \$299 kits.

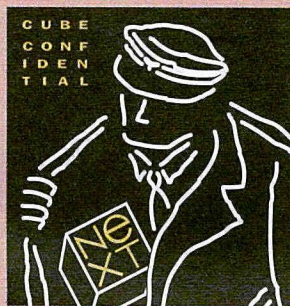
Would you believe it took three NeXT employees an hour of argument in the conference room at BINDCO to decide where to place the shipping label on the packaging for NEXTSTEP? How many does it take to screw in a light bulb?

The highlight of ObjectWorld was Steve Jobs's appearance at the Computerworld Object Application Awards. After being introduced as someone, like Frank Sinatra, who really needs no introduction, Steve opened his remarks with two words, "optical disk," and started singing "I Did It My Way."

Someone else doing it his way is Burrell Smith, who in June got slapped with a restraining order barring him from approaching the property of Steve and Laurene Jobs. You may remember Smith's name as one of the engraved signatures on the insides of early Mac models. He's a very smart hardware engineer and member of the early Mac team who has evidently been spending a good portion of his time on the sidewalk in front of the Jobs's Palo Alto home. Smith may be responsible for certain thrown rocks and certain broken windows.

If encrypted NeXTmail and techie spy-stuff is your cup of tea, then you need a Lt. Sullivan mug. Leave him a voice-mail message at 415/978-3374 or send a secret tip to sullivan@nextworld.com. Sullivan's public key is: U1ggACA+iDAH3mBEb/bPA6ScVQMR/fPeDZWpnZKRB2A3+MLgqf8uXPbanDc0j/m3urv5w/zcWO4K7uM2JaU/7WHY1KUc3YcaOK5EAjq5HG4vZKg+hoch2JZo1AoaRzF1DLyRbFv96OO6Z2ya0umTLakBMy8NQ/diOg8lf+3ia8aEuS0ufX/0AAwEAAQ==

Lt. Sullivan



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FEATURE

Best of Breed

OUR FIRST ANNUAL AWARDS FOR NEXTSTEP PRODUCT EXCELLENCE

One measure of NEXTSTEP's superiority as a development environment is the exceptional suite of third-party applications that runs under it. This month, we honor the best of those products with our Best of Breed (BoB) awards for NEXTSTEP product excellence.

In naming the awards, we resurrected a phrase that was once commonly used at NeXT to suggest that NEXTSTEP offered better application-software choices than other operating environments. Two or three years ago, that was not truly the case. But in the last year, the editors and reviewers at NeXTWORLD have witnessed an explosion of new software that really does live up to the name Best of Breed. In some cases, the products are designed with similar functionality to traditional best-sellers on other platforms, but with added features or improved performance. In other cases, the products embody entirely new approaches that improve on familiar software models.

Best of Breed trophies were awarded in 14 product segments and three special categories. To keep the project manageable, we defined the product categories as broadly as possible, so in some cases competing products were not necessarily directly competitive. For example, instead of individual awards for word processing and desktop publish-

ing, we have a single category for document creation.

The judging panel was composed of 12 NeXTWORLD editors and contributing reviewers. The judges met numerous times and exchanged voluminous e-mail before reaching decisions on the nominees and winners.

To be as timely as possible, products were eligible for consideration if they were in wide beta release by April 25, 1993, and had shipped by the opening of NeXTWORLD Expo. Several nominated products – Pages from Pages Software, Frontface from nPoint, and Complete Access from Ocean Software – were scratched at the last minute when they failed to meet the second qualification.

The Best of Breed winners were announced at a gala awards ceremony during NeXTWORLD Expo. Practicing what we preach, we used many of the products honored here to produce the event. In particular, we want to thank Talus Imaging and Communications Corporation for its assistance in preparing the slide presentation for the BoB ceremony.

The 1993 BoB Awards are just the beginning. As hotly contested as some of our award categories were this year, we expect that our Best of Breed choices will be even harder to make next year, now that NEXTSTEP for Intel Processors is bringing its software base to a much larger potential market. – Dan Ruby



Jim Opfer accepting a Best of Breed award for his work in the NeXT community

BEST OF BREED



DOCUMENT CREATION

BEST OF BREED

PasteUp, RightBrain Software

Runner-up: WordPerfect for NEXTSTEP, WordPerfect Corporation

By combining the control of QuarkXPress with the usability of Aldus PageMaker and throwing in a grab bag of unique features that are only possible under NEXTSTEP, RightBrain gave NeXT users their first real page-layout program. Uniquely object-oriented, PasteUp lets you create documents simply by dragging and dropping elements and files onto the page. From there, its inspectors and panels let you adjust elements with a precision that should satisfy the fussiest professional. — Lee Sherman



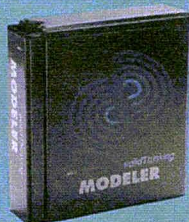
BUSINESS GRAPHICS

BEST OF BREED

Diagram! 2, Lighthouse Design

Runners-up: Concurrence, Lighthouse Design
Create, Stone Design

This new version of Diagram! piles innovation on top of innovation. Through a unique feedback program, Lighthouse programmers gave users a new interface to access its unique features more easily, while cleverly retaining the old interface for operations customers are used to. Advertised as a digital whiteboard, it lives up to its billing. A new file format allows for enhanced interapplication and custom-application manipulation of Diagram! data. — Dan Lavin



3-D AND CAD

BEST OF BREED

solidThinking Modeler, Gestel Italia

Runner-up: ZZvolume, Arès

Gestel's solidThinking is an extremely powerful 3-D modeler with a great depth of features. It sports a strong user interface, which places a universe of controls right on the screen. Its shader builder puts the elegance of RenderMan into the hands of nonprogrammers. We found solidThinking to be a strong entry in this field, which will continue to expand over the next several years. — Dan Lavin



FINANCIAL MODELING

BEST OF BREED

Mesa, Athena Design

Runners-up: Questor, Xanthus International
Solution, Appsoft

Mesa breaks little new ground, but for experienced spreadsheet users, that's good news. Whether your habits were formed by 1-2-3 or Excel, Mesa lets you keep using the formulas, keystrokes, and mouse actions you're used to, so you can get up to speed in no time. If you're a programmer, Mesa's Object Library Interface lets you incorporate its graphing and computation capabilities into your own apps. We still want an Undo key and a macro recorder, but even without them Mesa's the best basic spreadsheet for NEXTSTEP. — Robert Lauriston



GRAPHIC ARTS

BEST OF BREED

Virtuoso, Altsys Corporation

Runners-up: 1VISION, tms GmbH
Image, Appsoft

Virtuoso is simply the finest professional illustration tool on any platform. It also remains the standard for single-page composition. With excellent color support, fine typographic handling, and a strong interface, this is a must-have for every publishing professional. — Rick Reynolds



OBJECTWARE

BEST OF BREED

SmartFieldPalette, Objective Technologies

Runners-up: 3270Palette, Conexions
BarCodeKit, Hot Technologies

SmartFieldPalette is a NEXTSTEP TextField on steroids. The palette provides a powerful set of objects for verifying typed user information in forms-driven applications. You can program a SmartField to accept only numbers, letters, dates, or user-definable information. You can restrict input to a particular range of values and have the field automatically convert lowercase input to uppercase or vice versa. Many of NeXT's most important customers have made SmartField an integral part of their mission-critical custom applications. — Simson L. Garfinkel

PHOTOGRAPHS BY DAVID MANN

BEST OF BREED



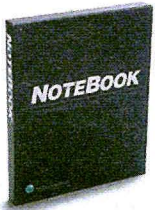
EMERGING MARKETS

BEST OF BREED

Screen Machine, d'ART Computersysteme GmbH

*Runners Up: TaskMaster, Lighthouse Design
VirtSpace, Pinnacle Research*

Screen Machine brings the promise of desktop video to NEXTSTEP for Intel Processors with an innovative ISA video board and a combination of objects and application programs that drop live video into NEXTSTEP windows. Screen Machine lets you add video into other NEXTSTEP applications or use the system's object library for adding video into custom software. — *Simson L. Garfinkel*



INFORMATION MANAGEMENT

BEST OF BREED

NoteBook, Millennium Software Labs

*Runners-up: Mathematica, Wolfram Research
Pencil Me In, Sarrus Software*

Millennium set a standard for original software design in this combination outliner and free-form database packaged around a familiar notebook metaphor. NoteBook is the place you clip and save unstructured information from any source. With its tools for organizing, searching, and reassembling that information into new forms to be exchanged with co-workers, many users have found that NoteBook is an indispensable application that they keep open on their screen at all times. — *Dan Ruby*



PERIPHERALS

BEST OF BREED

Goldleaf Imagesetter/eXTRASET, Goldleaf Systems

*Runners-up: Scan-X Color/PowerScan, HSD Microcomputer US
Talus T-1 Film Recorder/ImageMate,
Talus Imaging and Communications Corporation*

The combination of Goldleaf eXTRASET with a Goldleaf imagesetter represents the easiest high-resolution imagesetting solution available today — it's as easy as printing to a NeXT Laser Printer. Goldleaf's product is also the only solution on the market that guarantees the exact same version of PostScript Level 2 for proofing and imagesetting. eXTRASET and the imagesetter are some of the best-kept secrets on the platform and were a great surprise to our judges. — *Rick Reynolds*



DATABASE MANAGEMENT

BEST OF BREED

Parabase, Parabase Software Corporation

Runner-up: DataPhile, Stone Design

This is a product for people who are convinced of the benefits of building database applications around industry-standard SQL database servers. Parabase lets sophisticated end users build their own front-end applications for data entry and retrieval without having to understand anything about programming. It's as easy to use as a flat-file application such as FileMaker Pro on the Macintosh but can share data with custom applications and other commercial front ends. — *Daniel Miles Kehoe*



CONTENT AND INFORMATION

BEST OF BREED

The Electronic AppWrapper, Paget Press

*Runners-up: Birds of Europe, Expert Center for Taxonomic Identification
Sex, Lies and CD-ROM, Bay Area NeXT Group*

The *Electronic AppWrapper* is an exciting adventure into a multimedia world of music, poetry, computer animation, and Seattle-style insight. The disc contains descriptions of more than 100 NEXTSTEP products, many with screen shots, company histories, and demo versions. A sophisticated ordering application lets you use a credit card to easily purchase merchandise by e-mail. The *Electronic AppWrapper* is a great way to keep your finger on the pulse of NEXTSTEP's ever-growing third-party application market. — *Simson L. Garfinkel*



COMMUNICATION AND EMULATION

BEST OF BREED

NXFax, Black & White Software

*Runners-up: co-Xist, Pencom Software
SoftPC, Insignia Solutions*

All people use the telephone for communicating, but NEXTSTEP users have the added power of e-mail and faxing built right into their computer. Whether you have a machine at home or a machine on a network, a modem is there to talk to the outside world. Black & White Software's NXFax does an outstanding job of handling modem interactions between fax and serial communications on NEXTSTEP computers — and it works with popular modems. No other software in this class comes close. — *Joe Barelllo*

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PHOTOGRAPHS BY DAVID MAGNUSON

BEST OF BREED



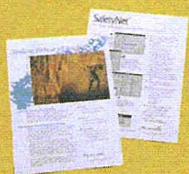
DEVELOPMENT AND AUTHORING TOOLS

BEST OF BREED

CraftMan, Xanthus International

*Runners-up: Callisto, Imagine Multimedia
GNU C Compiler, Free Software Foundation*

NEXTSTEP is widely praised for providing a development environment that lets programmers knock out custom applications in record time, but not everyone has the expertise or need to program with Objective-C and InterfaceBuilder. Multimedia projects, simple database applications, and educational courseware are mission-critical also, but they require tools that allow a developer to concentrate on content. Depending on your point of view, CraftMan, with its object-oriented tools and accessible scripting language, is either a more powerful version of Apple's HyperCard or an InterfaceBuilder for the rest of the rest of us. — *Lee Sherman*



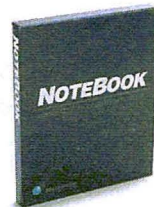
UTILITIES

BEST OF BREED

SafetyNet, Systemix Software

*Runners-up: Engage! Desktop, Millennium Software Labs
MetroTools, Metrosoft*

SafetyNet sets the standard for archiving UNIX file systems to 8mm and DAT tape. The program maintains a database of every file that has been backed up in an electronic index, which allows the application to fast forward the tape to the exact location of an archived file. The program also maintains a database of every tape in your tape library. All this functionality can drop the time to restore single files from hours to seconds. Unlike most other applications, SafetyNet also deals intelligently with linked files, backing up a file once and restoring both the links and the original files as needed. In case of disaster, the application can even build a bootable floppy that allows you to rebuild your file system with nothing more than the floppy and your tape. — *Simson L. Garfinkel*



MOST INNOVATIVE PRODUCT

BEST OF BREED

NoteBook, Millennium Software Labs

On a new computer platform, it is not enough to produce a solid, functional product that is similar to successful products on other platforms. A breakthrough product must take advantage of the special characteristics of the platform to provide an entirely new experience available nowhere else. NoteBook qualifies on that score by combining various existing ideas in a wholly original format that raises user productivity and group interaction to a new level. It is, in our judgment, the third-party product that embodies the freshest ideas and gives users a compelling reason to choose NEXTSTEP over competing systems. — *Dan Ruby*

COMMUNITY SERVICE

BEST OF BREED

Jim Opfer, consultant

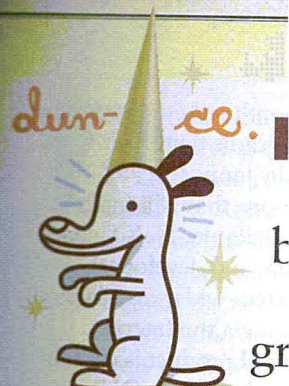
The NeXT market is a model of community spirit and volunteerism, in which developers, customers, user groups, consultants, resellers, and NeXT employees share an ethic of supporting each other and lending a helping hand. Jim Opfer exemplifies that spirit through his varied contributions to the NEXTSTEP cause. At the U.S. Air Force, he was the decision maker who took a chance on NeXT and in the process helped launch the company's successful business in the government market. He played an instrumental role in organizing ProNeXT, a group of NeXT's largest customers that has served as a sounding board for NeXT's technical and marketing decision makers. Since retiring from military service, he has worked closely with several third-party developers to define and improve their products, and he has served NeXT in a sales support role and in advising company executives on strategic directions. — *Dan Ruby*

OUTSTANDING NEXTSTEP IMPLEMENTATION

BEST OF BREED

**Advanced Technology Group, Williams
Telecommunications**

The future success of NEXTSTEP — and NeXT — relies heavily on the in-house solutions customers can develop for their mission-critical needs. To date, NEXTSTEP custom apps have broken new ground in fields as diverse as financial services, legal, health care, manufacturing, and retail. Our winner was chosen not only for technical expertise but for the far-reaching consequence of the development effort and consistent vision pushing NEXTSTEP into the telecommunications industry. Currently, Williams Tel has over 40 developers building and maintaining a state-of-the-art fiber-optic Asynchronous Transfer Mode network that stretches from coast to coast. With partnerships between phone companies, cable firms, and entertainment giants being signed every day, users will see examples of that vision on their own TVs in the very near future. — *Eliot Bergson*



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NEXTSTEP: Win-
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NEXTSTEP

BEST SEVERANCE
PACKAGE IN THE
INDUSTRY:
Former NeXT
President
Peter van
Cuylenburg

FEATURE



Runts of the Litter No show is complete with just blue-ribbon winners. The NeXT year past also boasted plenty of mutts, mongrels, and crossbreeds. Here's our salute to the people, products, and events that made NeXT-watching entertaining during the last 12 months.

PRODUCT

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MOST OVER-HYPED PIECE OF
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NEXTSTEP: Win-
dows NT by
Microsoft



MOST CONFUSING
UPGRADE PATH: Lotus,
for forcing Improv 1.0 users to
move to Windows in order to
use Improv 2.0

MOST AGGRESSIVE CONTESTANT
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KET: Talus, which would fight
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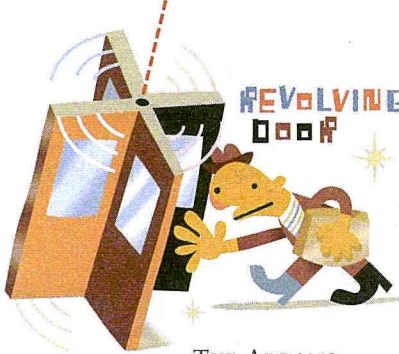
MOST EAGERLY ANTICIPATED
NONPRODUCT: NeXT RISC
Workstation

MOST IRRITATING CAPITAL
OFFENSE: NeXTstep, er,
NeXTSTEP, er,
NEXTSTEP

BEST SEVERANCE
PACKAGE IN THE
INDUSTRY:
Former NeXT
President
Peter van
Cuylenburg

REVERSE POLISH NOTATION
AWARD: Hewlett-Packard, which
plans to replace Drag and Drop
with Drop and Drag

GREATEST CONCENTRATION OF
NEXTSTEP KNOWLEDGE: Gen-
eral Magic employee cafeteria

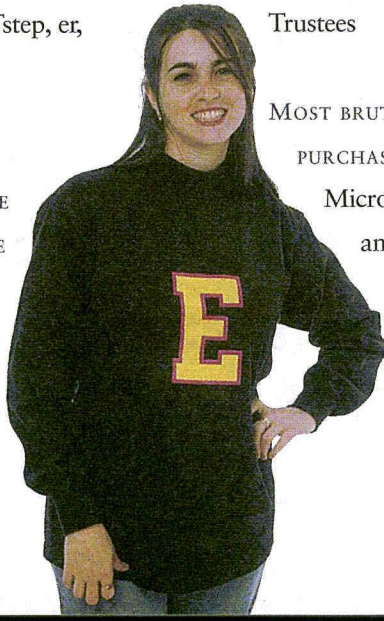


THE ADDAMS

FAMILY AWARD: Uncle Fester from
Appsoft; Morticia from Millen-
nium; and Lurch from Adamation

BEST DRESSED AT A CONVOCATION:
Don Frisbee, Chairman of the
Board, Reed College Board of
Trustees

MOST BRUTAL CUSTOMER
PURCHASE PLAN: Sun
Microsystems' buy-
and-grind program

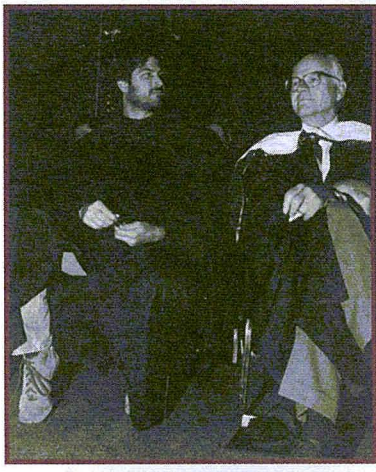


CELLULOID HERO AWARD: Glenn
Reid, for his uncanny resemblance
to Michael Douglas's vigilante char-
acter in *Falling Down*

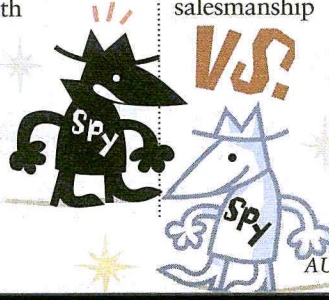
LOST IN THE
OZONE AWARD:
Intel, for the Pen-
tium processor's
contribution to
global warming



MOST INNOVATIVE CUSTOMER-
SERVICE POLICY: Neuron, which
shipped faulty fax-modems and
then closed its doors



WOULD YOU LIKE FRIES WITH
THAT? AWARD: NeXT, for the
"Happy Meal" evaluation kit
offering no upgrade path



BEAUTY IS SKIN DEEP AWARD:
Appsoft, for designing packaging
before software

BEST EXCUSE FOR ANYTHING NOT
DONE IN Q3 '93: "I was at Andy
Stone's party."

BREAKFAST OF CHAMPIONS AWARD:
John Perry Barlow, who couldn't
decide if it's a magazine or
a nutritional supplement



ANGUS DEMMING QUALITY
AWARD: Pages Software,
which will ship no app
before its time

MOST DRAMATIC ON-AGAIN, OFF-
AGAIN, ON-AGAIN, FORGET-ABOUT-
IT SALE: J.P. Morgan

LEAST JOURNALISTIC INTEGRITY:
G. Pascal Zachary, whose warmed-
over *Wall Street Journal* hit piece
appeared on the first morning of
NeXTWORLD Expo

OLIVER STONE CONSPIRACY THE-
ORY AWARD: Millennium Software
Labs, which combines secrecy with
salesmanship

ILLUSTRATIONS BY J. OTTO SEIBOLD

NEXTSTEP 3.1 represents a giant step sideways for NeXT and developers alike. Finally released on May 24, the renamed NEXTSTEP for Intel Processors isn't much different from the NEXTSTEP 3.0 that was introduced at the first NeXTWORLD Expo 18 months ago. Sure, it's more stable. On the other hand, NeXT now faces serious competition from Microsoft, Sun, and others.

NEXTSTEP 3.1 adds important support for multiple architectures. Fat binaries let a single executable run on both Motorola and Intel hardware; a spiffy new ProjectBuilder lets you compile for black hardware, white hardware, or both at the same time. That's less important with the demise of black hardware, but it suggests that future versions of NEXTSTEP will have check boxes for other architectures as well.

On the minus side, much of what NeXT announced last year with NEXTSTEP 3.0 is gone with the black hardware: So long to the Phone Kit, ISDN, and DSP chips. Gone too is AppleTalk – that's being handled by a third party. And now users will have to pay extra to run DOS and Windows programs.

Back at the first Expo, I had hoped that NeXT would be showing prerelease versions of NEXTSTEP 4.0 by now, but NEXTSTEP 3.1 took longer to debug and field than anybody expected. The Intel port was further complicated by the need to write dozens of device drivers for the varied hardware in the PC universe. And then there were unexpected problems with Pentium compatibility. It all added up.

These are all warning signs: NeXT is pursuing the wrong approach for releasing its software in the frenetic '90s. Rather than developing complete, integrated systems and not shipping until they are perfect, NeXT should be shipping its software as fast and as often as possible, bugs and all.

Early and Often

SIMSON L. GARFINKEL

Customers don't want perfect software next month – they want usable software yesterday. Of course, NeXT can't ship programs that don't work. But NEXTSTEP 2.1 worked on Intel processors in January 1992, and NEXTSTEP 3.1 for Intel has been working for more than six months. Rather than making these early releases readily available, NeXT gave copies to only a few of its most important customers and developers. A better strategy would have been to make a base system widely available back in January 1992 and distribute weekly updates via the Internet.

NeXT's reluctance to ship anything but a finished product is complicated by the dearth of programmers on the company's payroll. Object-oriented programming is a great accelerator, but it still takes more than two or three people to develop each major application or subsystem. Many of the bugs in NeXT's Indexing Kit were found by Stone Design, which used the kit as the basis for DataPile.

NeXT – and to a certain extent its developer community as well – is still gripped by the myth of two or three guys writing the next killer app in their basement. Traditionally, NeXT has simply hired the best hackers around and then stood back. But while that's a great recipe for innovation, it's

not the right way to deliver bug-free code.

So the answer for NeXT is simple: Ship interim releases, hire more programmers, and unbundle or unload to third parties as much non-core functionality as possible. Either that, or ship the source code and let us fix the bugs ourselves. ♦

SIMSON L. GARFINKEL, NeXTWORLD senior technology editor, is coauthor of NeXTSTEP Programming (Springer-Verlag, 1992).

After slimming down, NeXT has to change its strategy.

At his company, NeXT has only begun, and it's a long transition to meet the new challenges.

NeXT came out of the gate itself was wildly successful. The product should have been a hit.

But behind the curtain, the marketing signals have emitted a warning. On the other side, NEXTSTEP is the hands that want it out of stock today. In general, the sales for very few of those sold about. The product is not as good as it seems and suffers from a lack of features.

It would be easy to adjust to its new skin environment, and suffering from growing pains. And, if the problems are symptoms behind. They can be traced back to the beginning.

NeXT's people are not used to overestimating the difficulty of moving NEXTSTEP and moving a large number of NeXT employees among themselves, with

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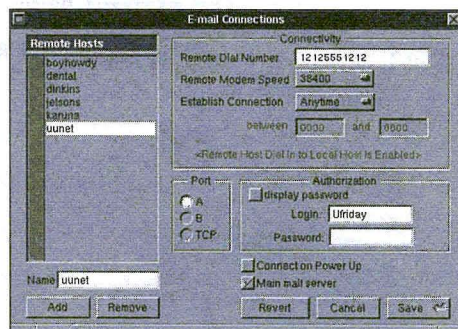
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After slimming down, the new NeXT looks pretty good. But, having shed all those unsightly pounds of magnesium, NeXT has to change its habits and behavior to keep its new figure. At his Expo keynote, Steve announced that NeXT had completed its transition to a software company. The transition, however, has only begun, and NeXT must move aggressively to change its organization to meet the new challenges it faces.

NeXT came out of Expo riding a new wave of momentum. The show itself was wildly successful. The high-level strategy more or less makes sense. The product shipped, and the waiting press and customer base ate it up.

But behind the curtain, a number of troubling signals have emerged. On the distribution side, NEXTSTEP is not getting into all the hands that want it. NeXTConnection is out of stock today. Ingram is not yet ready to fill orders. The sales force is actually shipping very few of those solid orders Steve talked about. The product itself is tricky to install and suffers from a lack of drivers.

It would be easy to say that NeXT is just adjusting to its new skin, growing into its new environment, and suffering understandable growing pains. And, in fact, none of these problems are fatal. But these problems are symptomatic of its old skin, the old NeXT that must be left behind. They can be traced directly to NeXT's organizational flaws.

NeXT's people are among the best and the brightest in the industry. It's difficult to overestimate the amount of talent required to produce NEXTSTEP and move it out the door. The bad news is that an inordinate number of NeXT employees are senior people, accustomed to strategizing among themselves, with a minimum of input from the outside. Uncount-

able committees and internal presentations distract people from real feedback from customers, developers, and the market at large. The arrogance charge has been made for years, and, unfortunately, it is apparently still valid today: After restructuring, the large and ponderous company is showing signs of being small and ponderous.

NeXT should change its internal workings. Make individuals, not committees, responsible for projects, including all the details required for complete follow-through. Focus the enterprise on the meat and potatoes.

On the sales side, look outside for input. Stop relying on internal consensus. Talk to customers and implement their ideas. Get input from the sales force in the field.

On the software side, put a lot of effort into clear and easy distribution and flawless, easy-to-use software. Most important, devote even more energy to critical driver and installation issues (a need that became apparent over a year ago, but for which insufficient resources were allocated).

The frustrating thing is that NeXT is 98 percent of the way there. Now that Steve has made the hard strategic choices in the last six months, it is up to the line managers to make the new strategy work. It

appears that Warren Weiss is moving quickly towards a new approach in sales and marketing. With a free hand, his team should be able to make impressive gains over the coming quarters. The software team, as always, produces superb products, but needs to follow through on the details. All of this can easily happen if NeXT truly completes the transition by eliminating its misguided system of consensus decision making. ♦

DAN LAVIN *comments on business issues in NeXT Ink.*

Only the Beginning

DAN LAVIN

MetroTools 2.0

"Convenience and value recommend this bag of tricks"
- NeXTWORLD, Winter '92

"MetroTools' ability to reduce the size of the icons makes it a no-brainer for notebook computers", "The Norton Utilities of the NeXT world!"
- Mike Duggan, NEC

"Does everything as advertised!!"
- John Kobelansky

"MetroTools has done a great job integrating utilities that make NEXTSTEP life easier", "MetroTools made the quantum leap into my dock and into my heart" - Jiro Nakamura, NeXTwatch

"It runs beautifully - a real pleasure"
- Richard Lawrence

"...good support, good product. I now have a zillion working fonts!"
- Chip Sieglinger

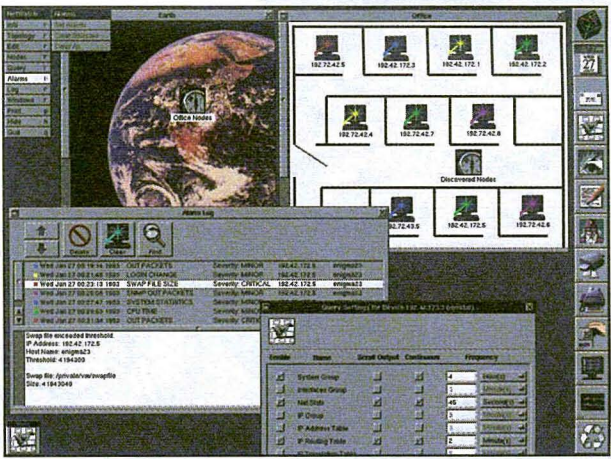
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- Craig Hansen, Motorola

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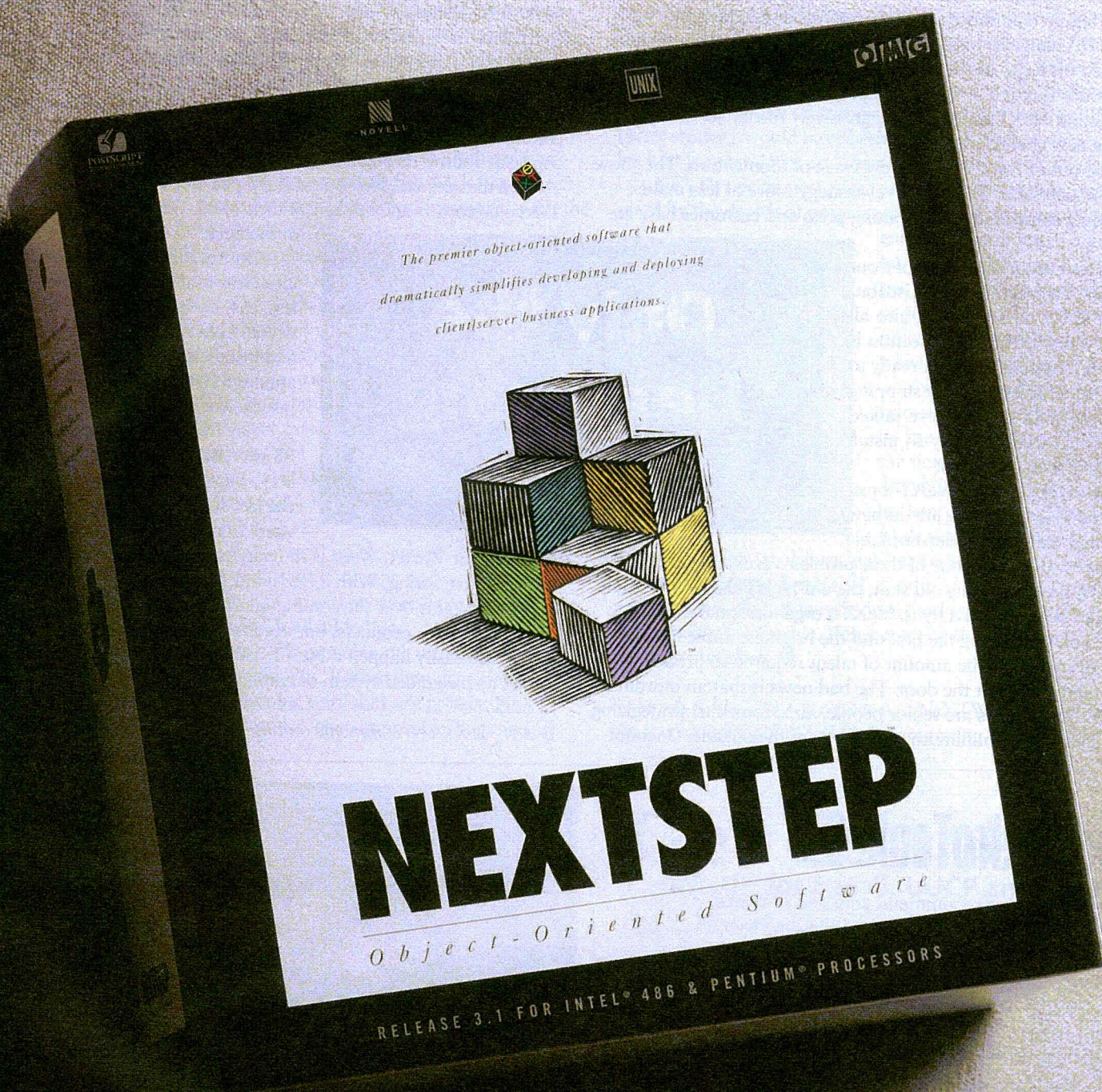
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Dueling Spreadsheets

Questor takes aim at Mesa while Solution takes target practice

by ROBERT LAURISTON

You don't need a spreadsheet to solve this formula: Previous number of NEXTSTEP spreadsheet programs minus unsupported NEXTSTEP spreadsheet programs plus new NEXTSTEP spreadsheet programs. The answer remains a constant of three.

The arrival of Xanthus International's Questor and the return of PowerStep as Appsoft Solution balance out the market retreat of Lotus Improv and Informix's Wingz, neither of which have announced plans to support NEXTSTEP for Intel. We compared Questor 1.01 with the latest release of Athena Design's popular spreadsheet, Mesa 1.4, and took an advance look at Solution, which was still in beta at press time (see the sidebar, "Solution on the Horizon").

Big picture

Questor is the first spreadsheet to take full advantage of the NeXT interface. All the object palettes used to create formulas, graphs, text fields, and so on are consolidated in a single ToolBox panel, and, in impeccable NEXTSTEP style, almost all commands that change the properties of those objects (cell format,

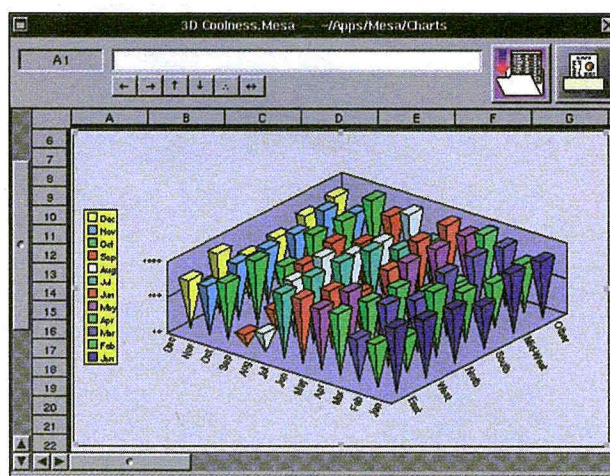
graph type, colors, etc.) are consolidated in a single, context-sensitive inspector.

By contrast, Mesa's relatively crude interface makes it more difficult to use than it should be. The program divides its commands among ten separate inspectors, each of which is broken up into an unnecessarily large number of aspects. You can Command-drag your most frequently used menu commands onto a floating icon bar for single-click access, but that Windows-like gadget seems out of place under NEXTSTEP.

Worksheets are strictly 2-D in both programs, but if you have enough RAM you can define gigantic flat sheets. Mesa provides only a single view of a worksheet, so working with big files means a lot of scrolling back and forth. Questor lets you open multiple windows for multiple views of a single document, and saves view settings along with each document. Unlike Mesa, Questor's windows have zoom controls, making it practical to use smaller-sized type.

Mesa's Undo command is almost useless—it undoes only the current cell entry, and then only if you haven't yet saved it by pressing the Return key. Though Questor has up to 200 undo levels that work with any series of commands, in this first release the feature has at least one significant bug: Undoing a cell entry doesn't undo the related change to an associated chart.

Mesa offers very good compatibility with other spreadsheets. You can read and write 1-2-3 2.x (WK1) and SLK files, read Excel 3.0 files, and import and export tab-delimited text. Mesa's 1-2-3 macro compatibility has been improved—this version handled without trouble the



Mesa lets you install any two commands or macros as icon buttons in the upper right corner of each spreadsheet window.

most complex 1-2-3 macros. Xanthus claims Questor can import WK1 and SLK files, but in my tests only delimited text worked reliably.

Mesa's on-line help is fairly good, though some advanced features (like scripting) are covered only in the printed manual. Questor's on-line help is more complete and seems to include everything in the 240-page manual and more.

Calculation

Both Mesa and Questor provide a wide selection of functions and operators, roughly equivalent to those found in 1-2-3 or Excel. For maximum compatibility with imported WK1 files, Mesa also supplements its native functions with a somewhat overlapping set of standard 1-2-3 @functions. Questor lets you define your own functions within the program, a handy way to expand the program's capabilities or manage often-used formulas. You can write your own functions for Mesa as well, but only in Objective-C.

The big difference between the two programs' number-crunching

capabilities is speed: Mesa is fast, Questor is slow. Recalculating one test spreadsheet on a 33MHz '040 NeXTstation Turbo Color took Mesa less than a second (a hair longer than it took Excel 4.0 on a 66MHz '486), but took Questor 15 seconds.

We also

found a marked performance difference during file operations. Opening and saving the test spreadsheet in Mesa took three seconds each. In Questor, opening took 28 seconds, saving 78.

Charts

Questor offers a slightly superior assortment of 2-D graph types. Besides the basic line, bar, stacked bar, column, stacked column, pie, area, and X-Y scatter charts that Mesa provides, Questor adds a combined line-column type. Questor automatically displays multiple pies when you select more than one data series; you need to create each series' pie separately in Mesa. Questor's stock charts give you full HLCO (hi, lo, close, open) information; Mesa has just HLC. Questor also lets you save your favorite chart templates to its ToolBox for later reuse.

On the other hand, Mesa gives you a choice of four 3-D chart types (Xanthus will offer 3-D through its separate Graphity charting program.) As in Wingz, the text labels on Mesa's 3-D charts rotate freely along with the perspective. This makes them much better looking and far more readable than 3-D charts created in Excel and other programs that support only horizontal and vertical labels.

Neither program excels in output. Before you print a Mesa spreadsheet, you need to define a layout utilizing the program's unfriendly, band-oriented report generator. You have to type the addresses of the portions of the worksheet you want to print into a scrolling list. Questor lets you use

Questor 1.01



Questor's elegant design, innovative features, and exemplary NeXT interface are more than offset by unacceptably slow recalculation and file operations. This initial release also has some significant bugs.

\$595

Xanthus International AB, P.O. Box 20161, S-161 02 Bromma, Sweden. 46/8/635-3000; or e-mail: questor@xanthus.se.

Mesa 1.4



Mesa sets out to be a straightforward basic spreadsheet, and that's just what it is. A macro recorder and a better undo would be nice, but Mesa gets the job done. Improved compatibility with 1-2-3 and Excel files is a major plus in this upgrade.

\$499

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capabilities is speed: Mesa is fast, Questor is slow. Recalculating one test spreadsheet on a 33MHz '040 NeXTstation Turbo Color took Mesa less than a second (a hair longer than it took Excel 4.0 on a 66MHz '486), but took Questor 15 seconds.

We also ranked performance differing file operations. And saving the test spreadsheet took three seconds on Questor, opening took 28 seconds on Mesa.

Mesa offers a slightly superior set of 2-D graph types: basic line, bar, stacked bar, stacked column, pie, X-Y scatter charts that can be rotated. Questor adds a line-column type. Questor also displays multiple windows. You can select more than one window. You need to create each window separately in Mesa. Stock charts give you full (open, high, low, close, open) information. Mesa has just HLC. Questor lets you save your favorite layouts to its ToolBox for later use.

On the other hand, Mesa gives you a choice of four 3-D chart types. Mesa will offer 3-D through its graphing capability. In graphing, the text labels on 3-D charts rotate freely with the perspective. This makes them much better looking and more readable than 3-D charts in Excel and other spreadsheets that support only horizontal or vertical labels. The Questor program excels in output. When you print a Mesa report, you need to define a band-oriented report. You have to type the names of the portions of the report you want to print into a band. Questor lets you use

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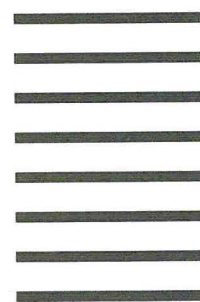
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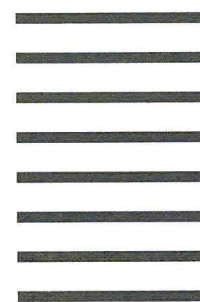
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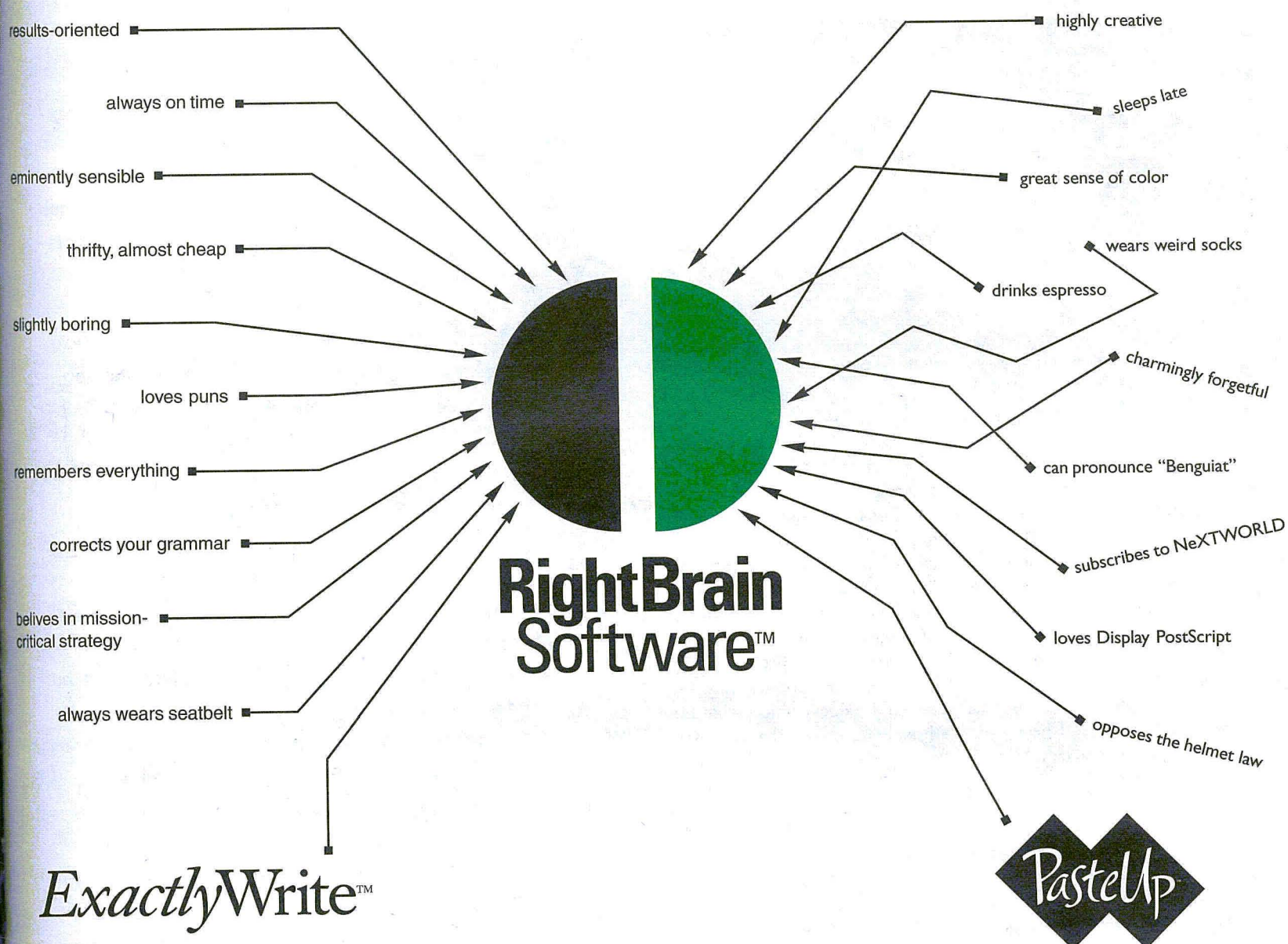
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We're of two minds recently...

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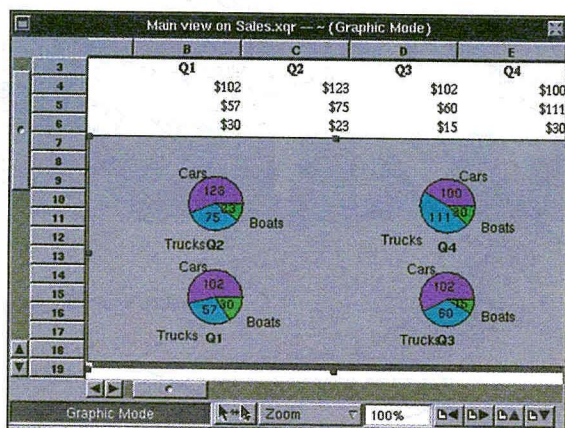
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Questor can automatically create multiple pie charts for a range of data, saving time and effort.

the mouse to select print ranges, but otherwise it's not much better. In both programs, each range selected for printing starts on a new page. Also, since there's no WYSIWYG report editor, fine-tuning a report means repeatedly printing to Preview, then switching back to the spreadsheet and making blind adjustments.

Programming

Missing from both programs is one of the most basic spreadsheet tools: a macro recorder. You can, however, still automate simple or complex tasks by using the programs' scripting languages.

Questor's InterfaceBuilder-type programming tools make it much easier to build spreadsheet-based applications. The program's tool palettes include a wide variety of gadgets, including text fields, word processors, buttons, sliders, and gauges. Timer objects can be used to perform recurring tasks, like running an SQL query once an hour to keep your spreadsheet in sync with host data. You can use these objects by simply dragging them from the ToolBox to your worksheet. To make a slider control a cell's value, you simply Control-drag to connect the two.

For more complex tasks, you must write scripts in Questor's QScript language, but even non-programmers should be able to adapt the provided sample code to basic tasks like user-input prompts and simple dialog boxes. The program automatically checks syntax and flags invalid code. Writing scripts is further eased by a command palette with on-line help describing each command in detail, though in release 1.01 that particu-

lar help file was missing.

Mesa's scripiter lacks Questor's nifty objects, command-pasting script editor, and syntax checker. Instead, you just type commands in a text editor. The program's BASIC-like MScript language isn't covered in the on-line help and is only sketchily defined in a terse 25-

page manual. This makes writing Mesa scripts an arcane, tedious, and decidedly un-NEXTSTEP-like process.

For C programmers, both programs include APIs that you can use to incorporate their capabilities into your own custom apps. But I'm C illiterate, so I'm not qualified to judge the quality of the APIs. Questor is clearly better suited for use in database applications, since it includes query objects that hook directly to the Database Browser, and Mesa relies on embedded SQL command strings. On the other hand, Mesa's superior performance makes it a more likely choice if you want a canned calculation engine.

Balance sheet

Questor's superior NeXT interface is more than offset by its inferior performance, which slows even the fastest hardware to an exasperating crawl. The initial release is also compromised by significant bugs. In addition to the ones mentioned above, cell text didn't wrap properly, and the program occasionally crashed when opening and closing documents.

Mesa's reliability, speed, and compatibility with standard file formats make it the clear winner of this round. Though its interface is klunky, and the program really needs an undo key, macro recorder, and better report generator, it's still the best NEXTSTEP spreadsheet you can currently buy. ■

ROBERT LAURISTON is a NeXTWORLD contributing editor.

SOLUTION ON THE HORIZON

We'd originally planned to include Appsoft's new Solution spreadsheet in a three-way review, but the company didn't make its planned Expo ship date. Instead, here's a first look at the product based on the latest version available — .80 beta — as we went to press.

Solution is based on PowerStep, a never-released Ashton-Tate product. Looking at the interface, however, you would never suspect Appsoft's product is any relation. Solution's spare, simple design could make it the easiest-to-use NeXT spreadsheet yet.

Solution is also easy to use because it simply doesn't try to do too much. Worksheets are strictly 2-D, up to 4096 rows by 256 columns. As in Mesa and Questor, there's a palette from which you can select functions to paste into cells, with a help window explaining each function's use and arguments. You can import data in delimited or WK1 format but can save only in Solution format. You can zoom in or out on the sheet, but you can't split the window or open multiple views of a single sheet. The menus are well-organized, and most commands are consolidated in the Inspector, though they're sometimes inconveniently split among more aspects than really seems necessary. Recalculation was almost as fast as in Mesa.

Solution's graphing capabilities and selection of chart types are quite similar to Mesa's. Solution's method for rotating the perspective of 3-D charts is the program's best feature. Instead of fussing with the usual confusing sliders, you just double-click on the chart, grab one of the handles that appear, and drag it. A wire-frame view of the chart rotates in real time as you drag the handle around. Unfortunately, the text labels don't rotate, so the 3-D charts aren't as readable as Mesa's.

As in Mesa and Questor, there's no macro recorder, but there is a scripting language, WILMA. (Trivia item: The Windowing Interactive Language for Macro Applications is a play on the language in Ashton-Tate's FrameWork, FRED.) You can assign macros to the menu or push buttons and use them to write your own functions.

Solution should prove a nice entry-level spreadsheet for users with relatively modest needs. The beta's too early to judge, but if the release version works well and matches the beta's feature set, it promises to be a strong competitor among NEXTSTEP spreadsheets.

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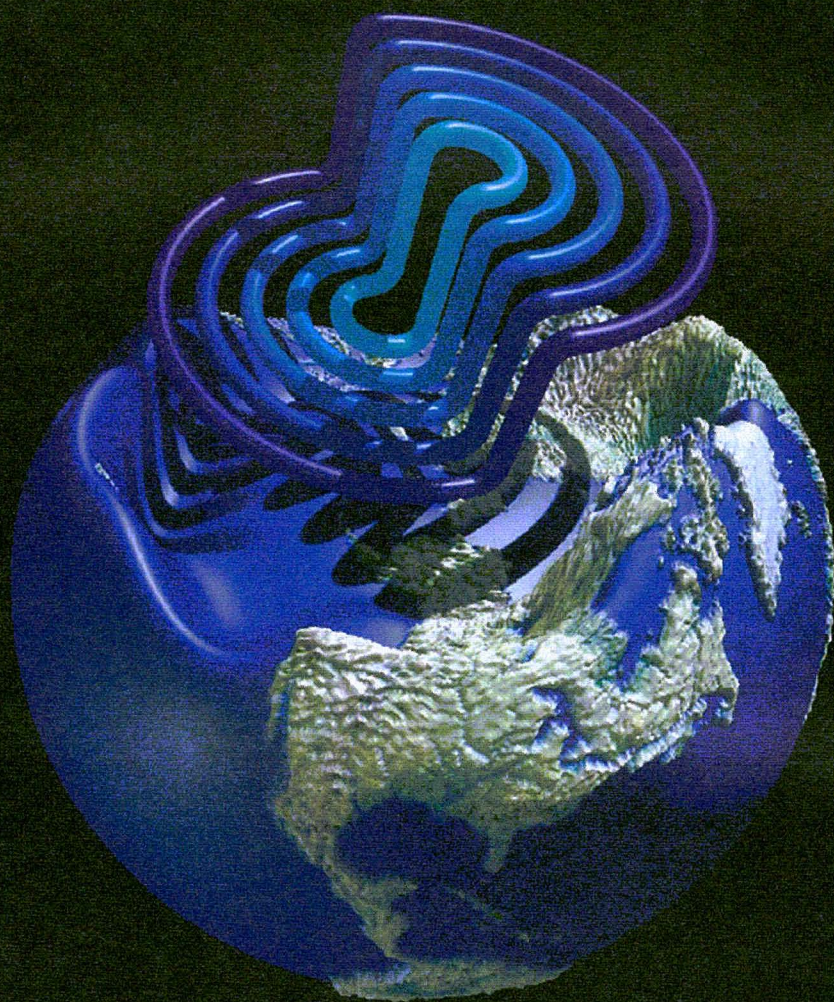
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Pumping Up The Volume

ZZvolume breaks ground as the first CAD product on NEXTSTEP

by JOEL ORR

Conceptual architectural design has not yielded widely to computerization. All architects use CAD, but mostly for the automation of production drafting. Nobody has quite succeeded in creating a conceptual modeling system that captures the designer's heart. Rather than set users free to concentrate on design, most programs force them to work within the constraints of the software.

ZZvolume, the first full-blown CAD product available for NEXTSTEP (albeit for a niche market), takes a promising first step toward conceptual design. But missing fea-

tures in this release from Lyon, France-based Arès leave the product short of providing a compelling reason for architects and designers to move to NEXTSTEP.

Building blocks

In the ZZvolume universe, all work is done on reference planes, which can be set on the orthogonal axes or rotated at any angle. Setting the reference plane is simple and can be done in a variety of ways.

Modeling tools consist of blocks – six-faced polyhedra – and a variety of wire-frame elements. Blocks are true solids, although functions for dealing with their mass

properties that you might find in a mechanical-design system are absent here. Blocks are parametrically defined: You can create a block without specifying its dimensions, then size and position it precisely by means of convenient dialog boxes. This is a powerful feature.

A negative block, or “piercing,” is used to make holes in blocks while maintaining their solid character. Sashes can also be used for door and window details.

Chains of blocks can be automatically created along a wire-frame path, making object construction in ZZvolume quite tolerable. Making blocks and gluing them together individually, especially in nonorthogonal ways, is not an architect's idea of fun. Wire-frame elements can be lines, circles, circular arcs, splines, and polylines. They need not be planar.

An amazing variety of shapes can be created using these apparently limited components, and if you can move beyond the frustration of figuring out construction methods, there is a certain satisfaction in creating complex geometries within severe geometric constraints.

Using simple camera metaphors, you can create views and perspectives that let you visualize your project in any conceivable way, including specifying the position of the sun by entering a particular date and time.

Nongraphical information – text and voice – can be stored with every object, allowing you, for instance, to call out the name or cost of any element in your project.



ZZvolume allows users to create architectural drawings using blocks and wire-frame elements.

Objects can also be created and stored in a reusable library. Instances of these can be placed, scaled, colored, and even exploded.

Reality check

ZZvolume doesn't do drafting; it has no dimensioning capabilities and very limited text features. It can, however, export files in AutoCAD DXF or EPS formats. Projects can thus be transferred to 2-D programs for the creation of production drawings.

ZZvolume's performance is adequate to slow, depending on the complexity of the project. The manual is replete with tips for faking elements such as windows by using wire-frame elements to reduce the number of faces. The more faces involved in a design, the longer you must wait for shading and redrawing.

The bottom line is that if you are an architectural designer who is already committed to NEXTSTEP, here is a conceptual design tool worth checking out. It takes work, but once you are familiar with its modeling paradigm, you can use ZZvolume to create a wide variety of shapes and manipulate them in useful ways. But this is not the product on which to base a decision to go with NEXTSTEP.

Still, conceptual architectural design in NEXTSTEP is new and worthy of applause. You really can do conceptual design on this platform now – if you are willing to work at it.

DR. JOEL N. ORR is a consultant, speaker, and writer specializing in architectural and engineering automation. He can be reached at 4153485@mcimail.com.



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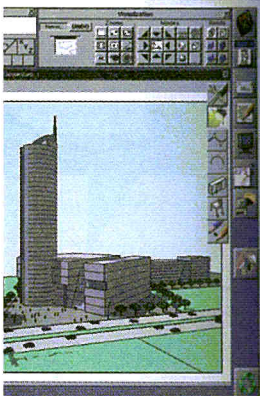
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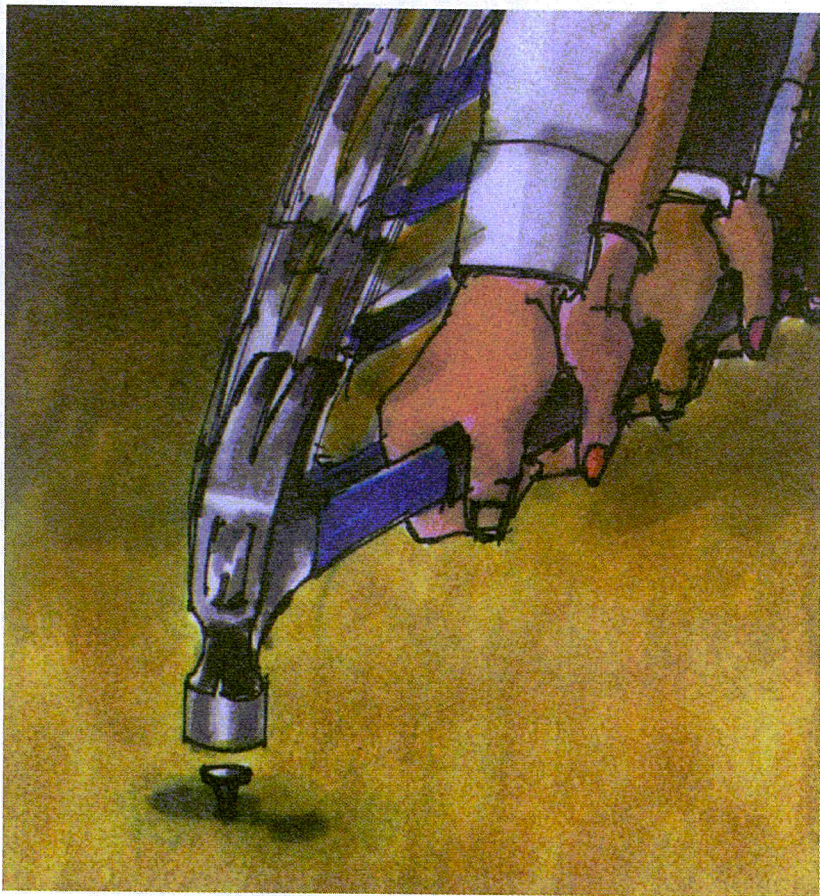
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HyperClone

Os HyperSense truly useful or just a good idea surrounded by hype? The answer depends on how well you know HyperCard, Apple's hypertext authoring system. Thoughtful Software's eagerly awaited authoring software duplicates much of HyperCard, with a nearly identical scripting language and an ability to read existing stacks. For experienced stack developers, this

HyperSense (beta)



An easy-to-use HyperCard look-alike with an accessible scripting language and the capability to convert many HyperCard stacks. Importing stacks is a bit-or-miss proposition in this first release. Lacks support for video, path-based animation, and MIDI.

\$499 per user; \$99 student (includes free upgrade to version 1.0)

Thoughtful Software, 616 East Locust St., Fort Collins, CO 80524. 303/221-4596.

shortens the learning curve and makes the transition to NEXTSTEP that much easier. For others, HyperSense may be an unfortunate case of too little, too late.

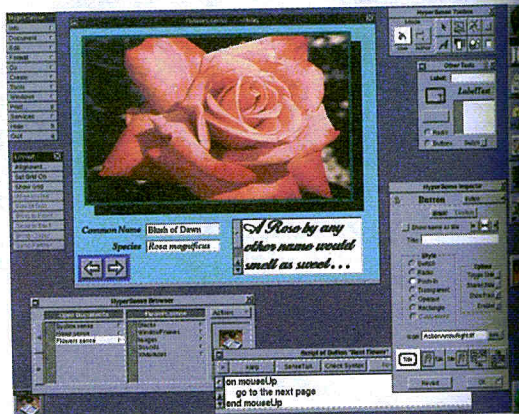
The benchmark authoring system under NEXTSTEP is CraftMan from Xanthus International. CraftMan is a far richer environment than HyperSense, with HyperSense's only advantage being HyperCard compatibility. When HyperCube, a predecessor of HyperSense, was first announced years ago, HyperCard was much more important than it is today. Although HyperCard is still influential, Apple has allowed it to slip from its once-dominant perch through lack of attention to the product.

HyperCard users will feel right at home when they first launch HyperSense. After adjusting to a few changes in terminology — documents instead of stacks, pages instead of cards, and shared

layers instead of backgrounds — you can work just as you would in HyperCard, even typing commands into a message box for quick execution and testing. This resemblance to HyperCard, however, extends to the program's sluggish operation. The home document, like HyperCard's home card, provides a starting point for browsing other documents, and it can contain global scripts that affect all the documents on your computer. Enhancements such as rich text, true color support, and CD-quality sound come gratis with NEXTSTEP. Thoughtful Software has also added some improvements. The Browser, Inspector, and Layers panels provide far greater control over the elements that make up a document. The message box maintains a history of recently executed commands, acting more like a UNIX shell.

Unlike HyperCard, HyperSense offers only two modes: a user mode for browsing and using HyperSense documents and an author mode for creating documents. In user mode, you can make simple changes, such as adding names to an address book, but you need to go into author mode to draw, add buttons, or write scripts.

Any object in a HyperSense document can have an attached script. Scripts are written in SenseTalk, an event-driven language with an English-like syntax that is easy for nonprogrammers to grasp. Besides the language, HyperSense achieves its claims of HyperCard compatibility through the use of an intermediary format called HIFF (HyperCard Interchange File Format), which is similar to RTE. To convert a stack, you must first use ConvertIt! from Heizer Software to generate the HIFF file on the Macintosh. You then import the HIFF file into the HyperSense Importer document, which will output a HyperSense version of the stack.



The HyperSense development environment adds NEXTSTEP's advantages to a familiar metaphor.

To test these claims, we ran several stacks through the conversion process, including many of the examples that ship with HyperCard. While simple stacks came over with only minor problems, most stacks required major tweaking to get them to work properly in the NEXTSTEP environment. Much of HyperCard's functions, including visual effects, hide and show pictures, the Dial command, and pop-up fields, are not yet implemented in HyperSense. Thoughtful Software has pulled off a real coup in providing NEXTSTEP users with such an accessible programming language, but until improvements are made to the SenseTalk compiler, the ability to convert HyperCard stacks remains an unfulfilled promise.

Indeed, while HyperSense captures much of HyperCard's form, it lacks much of the substance. For example, setting up links — the essence of hypertext — requires scripting instead of pointing and clicking. Scripters experienced with HyperCard or SuperCard will miss such niceties as the ability to pop up a list of functions, as well as the more powerful debugging tools provided with those programs.

HyperSense has tremendous appeal for educators, content developers, and hobbyists who want to leverage their knowledge of HyperCard as they move to NEXTSTEP. But the appeal of running HyperCard stacks under NEXTSTEP has faded during the product's long development cycle.

by LEE SHERMAN

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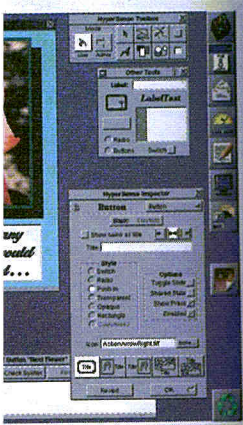
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Front Desk 1.03



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Integrity Solutions, 23 Empire Dr., St. Paul, MN 55103. 612/223-8484.

With a jewel like NeXTmail in NEXTSTEP's crown, why would anyone need an app to send inter-office messages? Maybe because FrontDesk displays messages in a traditional "while you were out" format. It also provides an electronic in/out board to display the location of users. Front Desk also allows you to send messages via the app itself, NeXTmail, or plain ASCII (for non-NEXTSTEP users on your network). Nifty graphics for meetings, lunches, vacations, and illnesses display in/out status, and an animated icon shows that a new message has been received. To be most useful, everyone in a workgroup needs to use it. If you work in an organization that employs a receptionist to route messages, this messaging system is a highly functional, well-implemented app. For offices with a voice-mail telephone system, it is probably superfluous. **Dan Ruby**

Reviews Desk

This month's desk is packed with high-quality products. *Birds of Europe* was a Best of Breed nominee; *Image Agent* will be indispensable for some graphics users. Judging from the developer packs hopping off the show floor at Expo, the desk will continue to be flooded with innovative products. One sore spot: I still have yet to find a reason to throw away my single-user paper *Day-Timer*. — **DAN LAVIN**

Image Agent 1.1c



\$99 or free with PixelMagician

Bacchus Software, 2210 Wilshire Blvd. # 330, Santa Monica, CA 90403. 310/820-5930; or e-mail: info@bacchus.com.

Image Agent works with NEXTSTEP 3.0 or later to instantly give any application that can accept drag-and-drop images (and correctly use the NEXTSTEP 3.0 Services protocols) the capability to import 16 (17 with NS 3.1) useful graphics file formats. Install this graphics file converter once and an invisible watcher catches any otherwise-foreign file format, such as GIF, BMP, PCX, or PICT, and quickly filters it in the background, handing the application an image it

can accept. It works very smoothly, but only with those apps that support Services correctly. **Rick Reynolds**

Inspected by: Pinnacle



\$51 for three-pack

Pinnacle Research, 4725 E. Sunrise Dr. #435, Tucson, AZ 85718. 602/529-1135.

This collection of inspector gadgets works seamlessly with the Workspace Manager to provide additional capabilities for viewing and modifying files that power users won't want to be without. It lets you view images and sounds with different scaling options and apply compression, all without leaving

the panel to launch a separate application. If the software has a fault, it's the attempt to pack too much into the space of an inspector panel. The increased functionality comes at the price of lost simplicity. **Lee Sherman**

Birds of Europe CD-ROM



\$149

Institute for Taxonomic Zoology, University of Amsterdam, P.O. Box 4766, N-1009 AT Amsterdam, The Netherlands. 31/20/525-7239.

Even if you don't know a Lesser White Fronted Goose from a Ringed Plover, you'll enjoy this information-packed multimedia experience. Created with Xanthus International's CraftMan, *Birds of Europe* offers abundant information about 400 birds: realistic bird calls, more than 1200 full-color TIFF images, and assorted taxonomic details. All that's missing are full-motion video sequences. The information is accessible through a solid front end with multiple points of entry. **Lee Sherman**

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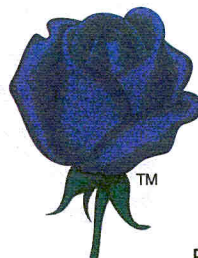
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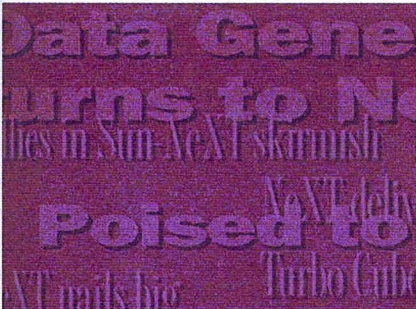
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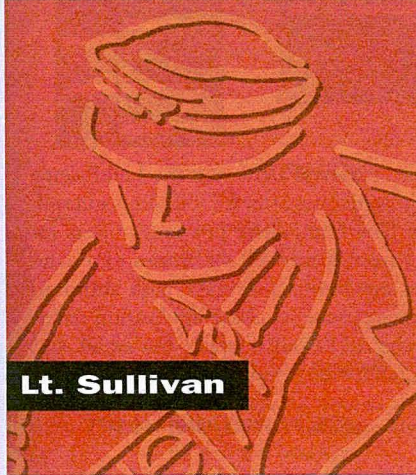
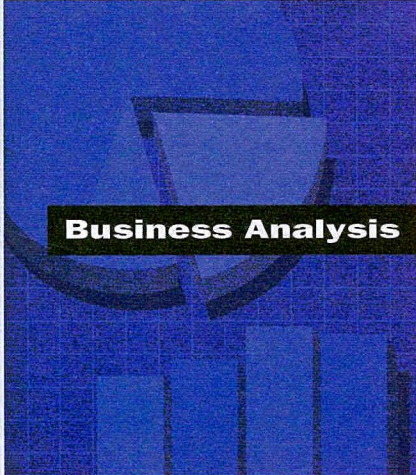
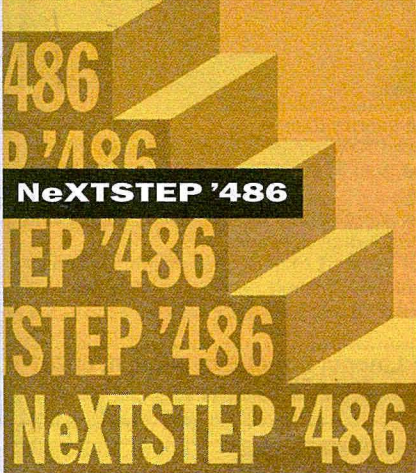
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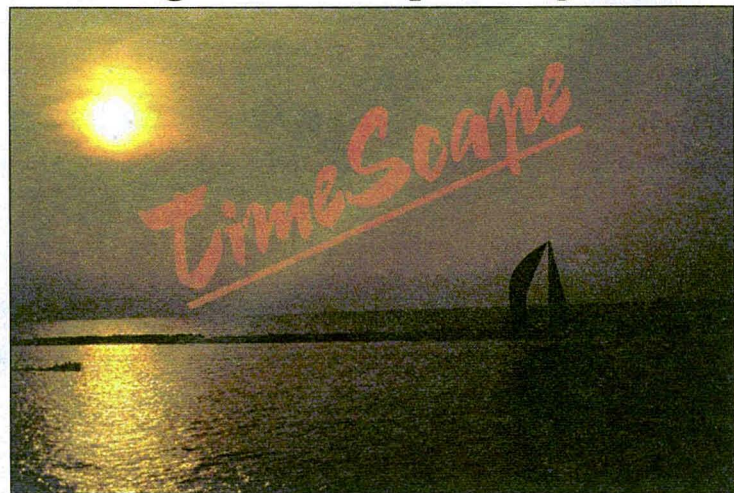
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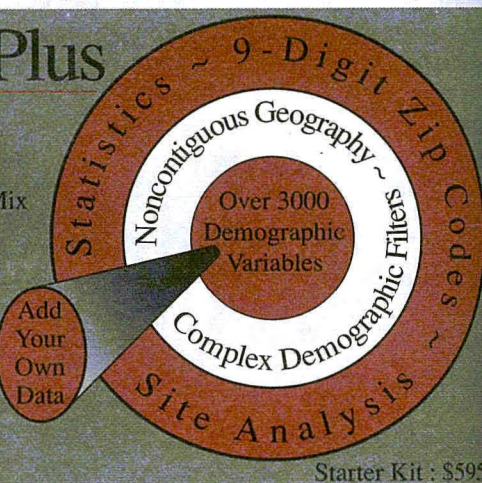
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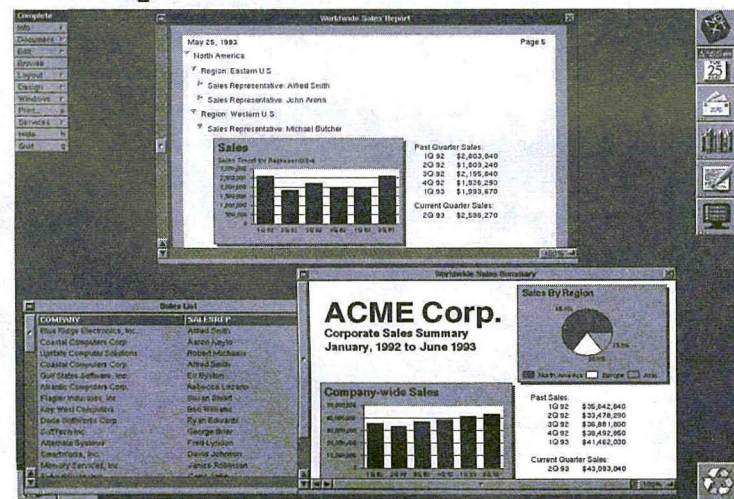
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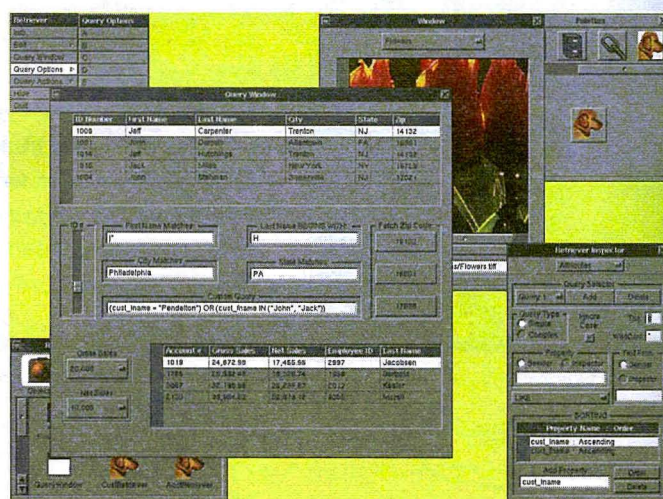


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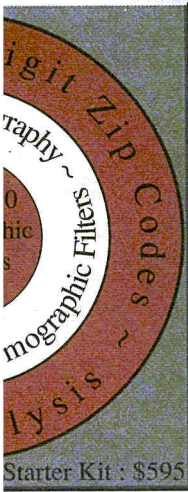
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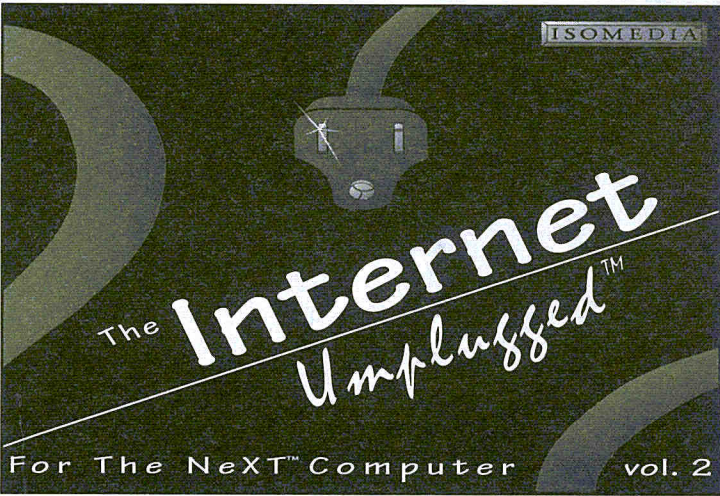
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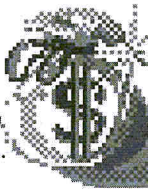
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Winston Churchill once said that there is no meal quite so nutritious as that of one's own words. In that case, the astonishing NeXTWORLD Expo '93 certainly improved my diet. (Actually, I found Expo a cornucopia in general... but I digress.)

As you may recall, I last used this space to write what might be called a premortum of NeXT, saying that if NeXT were anything but dead or mighty moribund by late May, I would use the occasion of Expo to eat my own words.

Well, I wish to hell we used tastier newsprint for this rag.

Not only does it appear I still have Steve Jobs to kick around, I may have a longer future in this community than I could have imagined back in March. And no, I don't believe my faith in this most recent and miraculous resurrection is simply a product of the ol' Reality Distortion Field.

For one thing, the RDF—or at least that large part of it that relies on smooth theatricality—was barely discernible during Steve's keynote speech. He suffered a series of audio problems that would have strained the patience of Job, let alone Jobs. He was down to his hole cards, and they looked surprisingly good.

Of course, he's still got NEXTSTEP, which most sensible people who have actually experienced it agree is the best—I could say tastiest—operating system in the universe.

(I ran into Sun founder Bill Joy on the plane to Expo and he expressed both this sentiment and his genuine sorrow over what both of us, at that point, took to be its last hurrah.)

But now we've got NEXTSTEP on hardware that doesn't require a crazy act of faith to buy. NEXTSTEP for Intel shipped on schedule, it works, and it's packing a whole bunch of cool new features.

Further, NeXT has lined up a very credible group of computer manufacturers, nice beige outfits like Dell and Epson, who will preload NEXTSTEP on the machines they market and sell.

Most importantly, NeXT now has the Object•Enterprise arrangement with Hewlett-Packard, which will provide terrific integration, depth, and development speed to any company using HP servers and NEXTSTEP clients.

In the wildly unlikely event that I were running MIS for some oil-futures brokerage house, I would go ahead and gamble on NEXTSTEP whether or not *Unix World* knows of its existence.

There remain a couple of watch-outs that might bear attention. I'll get into those next month. But right now, I've got that nice feeling I get after dinner. ♦

After his Expo feast, JOHN PERRY BARLOW will continue to appear in this space every issue.

Eating Well

JOHN PERRY BARLOW



Secret Formulas

NEXTSTEP GAMES

by SCOTT KIM

Every day, thousands of people make financial decisions based on spreadsheets. But how do they know that the calculations are correct? Correct addition doesn't necessarily imply a correct formula.

Consider the example below, which I created using Athena Design's spreadsheet program, Mesa. In each of the four cases, the same formula is used to compute the value of Fruit from the values of Apples and Oranges. What's the formula for Fruit? From the first two cases, you might think that Fruit=Apples+Oranges. But the last two cases show that this is wrong. The correct formula is Fruit=Apples*(Oranges-1), which coincidentally equals Apples+Oranges in the first two cases.

Apples	Oranges	Fruit	Apples	Oranges	Fruit
2	4	6	4	5	16
Apples	Oranges	Fruit	Apples	Oranges	Fruit
3	3	6	3	7	18

CONTEST

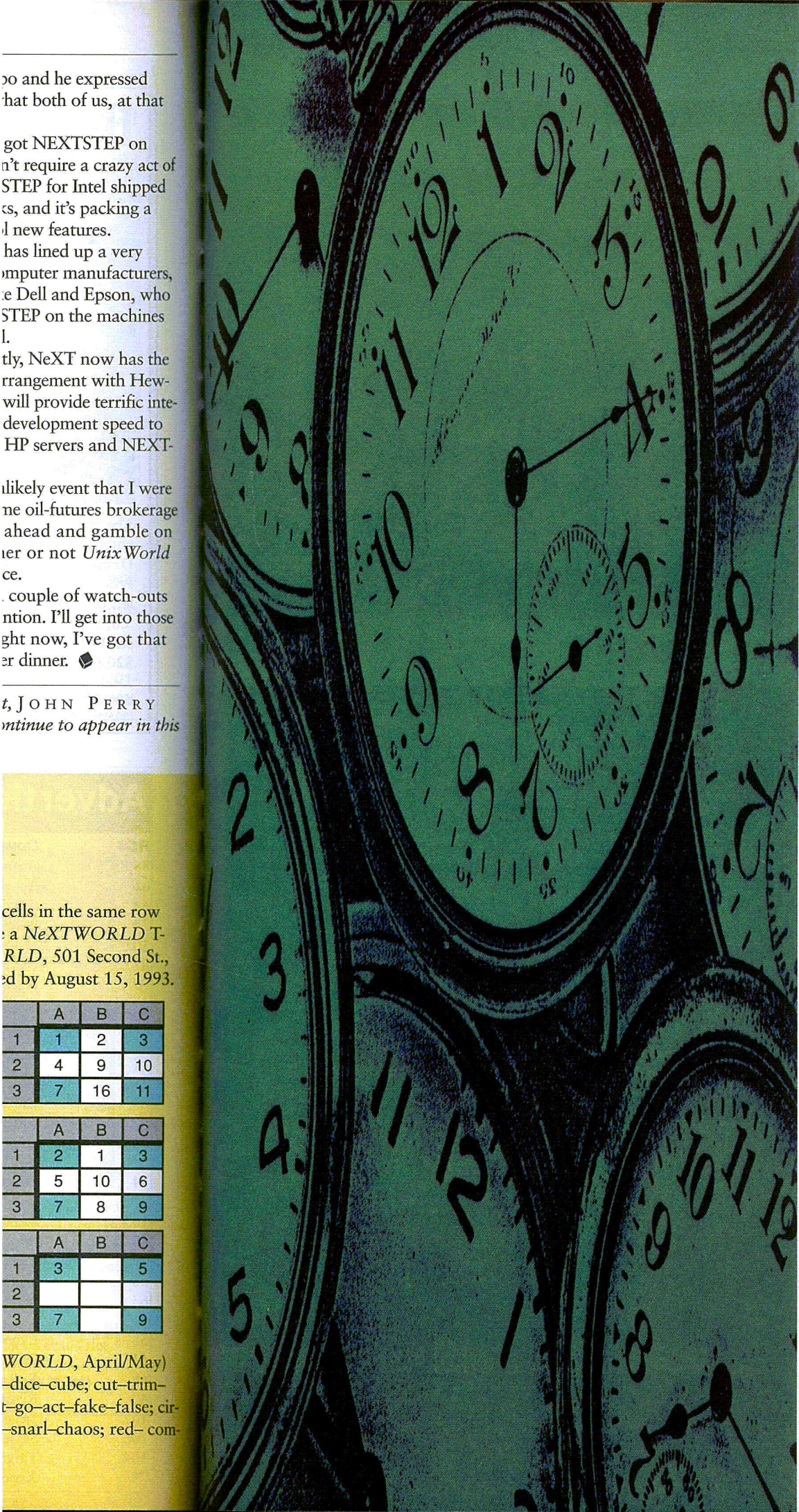
At right is a trickier spreadsheet. As before, the same formulas are used for each grid. The four numbers in blue were typed in manually; the remaining five numbers were computed from numbers in either the same row or the same column using only add, subtract, multiply, and divide. For instance, the value in cell B1 is always C1-A1.

Figure out the secret formulas, then fill in the missing numbers in the last spreadsheet. Hint: The formula for cell B3 is based on the other two

cells in the same column (B1 and B2), not on the cells in the same row (A3 and C3). Up to ten lucky winners will receive a NeXTWORLD T-shirt. Address entries to Puzzle Editor, NeXTWORLD, 501 Second St., San Francisco, CA 94107. Entries must be received by August 15, 1993.

	A	B	C		A	B	C		A	B	C
1	1	2	3	1	1	2	3	1	1	2	3
2	4	5	6	2	4	7	6	2	4	9	10
3	7	8	9	3	7	12	10	3	7	16	11
	A	B	C		A	B	C		A	B	C
1	1	2	3	1	1	3	4	1	2	1	3
2	5	10	6	2	4	8	9	2	5	10	6
3	8	18	9	3	7	22	9	3	7	8	9
	A	B	C		A	B	C		A	B	C
1	1	2	3	1	5	2	7	1	3		5
2	6	15	6	2	11	376	48	2			
3	9	28	9	3	10	750	14	3	7		9

The correct answers from Strange Chains (NeXTWORLD, April/May) are: do-cheat-ruin-seduce-undo; next-after-cast-dice-cube; cut-trim-beat-paste; part-set-fit-good-whole; true-just-fit-go-act-fake-false; circle-set-settle-square; order-row-pull-yank-snap-snarl-chaos; red-rade-companion-consort-agree-square-green.



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	A	B	C
1	1	2	3
2	4	9	10
3	7	16	11

	A	B	C
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2	5	10	6
3	7	8	9

	A	B	C
1	3		5
2			
3	7		9

WORLD, April/May)
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t-go-act-fake-false; cir-
-snarl-chaos; red- com-

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* "The CW Guide to Servers: Buyers' Scorecard," Computerworld, March 22, 1993.

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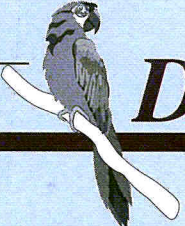
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			Suite	\$ 2,500
		7/2-7/9	Bungalow	\$ 3,100
			Suite	\$ 2,650
4 Days	JFK	6/1-6/7	Bungalow	\$ 2,500
			Suite	\$ 2,150
		6/14-6/18	Bungalow	\$ 1,500
			Suite	\$ 1,350
		7/15-7/19	Bungalow	\$ 1,300
			Suite	\$ 1,100

- 1 -

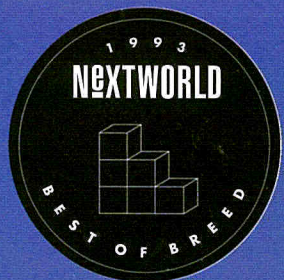
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